MAPK/ERK Pathway

MAPK families play an important role in complex cellular programs like proliferation, differentiation, development, transformation, and apoptosis. In mammalian cells, three MAPK families have been clearly characterized: namely classical MAPK (ERK), C-Jun N-terminal kinase/ stress-activated protein kinase (JNK/SAPK) and p38 kinase. Each MAPK-related cascade consists of no fewer than three enzymes that are activated in series: a MAPK kinase kinase (MAP3K), a MAPK kinase (MAPKK) and a MAP kinase (MAPK).

The MAPK pathways are activated by diverse extracellular and intracellular stimuli including peptide growth factors, cytokines, hormones, and various cellular stressors. In the ERK signaling pathway, ERK1/2 is activated by MEK1/2, which is activated by Raf. Raf is activated by the Ras GTPase, whose activation is induced by RTKs such as the epidermal growth factor receptor. The JNK and p38 MAPK signaling pathways are activated by various types of cellular stress. The JNK pathway consists of JNK, a MAP2K such as MKK4 (SEK1) or MKK7, and a MAP3K such as ASK1, TAK1, MEKK1, or MLK3. In the p38 pathway, p38 is activated by MKK3 or MKK6, and these MAP2Ks are activated by the same MAP3Ks that function in the JNK pathway.

MAPK signaling pathways has been implicated in the development of many human diseases including Alzheimer’s disease (AD), Parkinson’s disease (PD), amyotrophic lateral sclerosis (ALS) and various types of cancers. Therefore, the development of small molecule drugs that selectively inhibit individual components of MAPK signaling pathways is a key therapeutic strategy for cancer and neurodegenerative disorders.

References:
Target List in MAPK/ERK Pathway

- ERK .......................................................... 4
- JNK .......................................................... 12
- KLF .......................................................... 17
- MAP3K ......................................................... 19
- MAP4K ......................................................... 22
- MAPKAPK2 (MK2) ........................................ 24
- MEK .......................................................... 26
- Mixed Lineage Kinase ................................. 32
- MNK .......................................................... 34
- p38 MAPK .................................................... 36
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ERK
Extracellular signal regulated kinases

ERKs (Extracellular-signal-regulated kinases) are widely expressed protein kinase intracellular signalling molecules that are involved in functions including the regulation of meiosis, mitosis, and postmitotic functions in differentiated cells. Many different stimuli, including growth factors, cytokines, virus infection, ligands for heterotrimeric G protein-coupled receptors, transforming agents, and carcinogens, activate the ERK pathway. In the MAPK/ERK pathway, Ras activates c-Raf, followed by mitogen-activated protein kinase kinase (abbreviated as MKK, MEK, or MAP2K) and then MAPK1/2 (below). Ras is typically activated by growth hormones through receptor tyrosine kinases and GRB2/SOS, but may also receive other signals. ERKs are known to activate many transcription factors, such as ELK1, and some downstream protein kinases. Disruption of the ERK pathway is common in cancers, especially Ras, c-Raf and receptors such as HER2.
## ERK Inhibitors & Activators

<table>
<thead>
<tr>
<th>Compound</th>
<th>Cat. No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AG126 (Tyrphostin AG126)</td>
<td>HY-108330</td>
<td>AG126 is a tyrosine kinase inhibitor which can prevent the activation of mitogen-activated protein kinase p42/44ERK (ERK2). Purity: &gt;98.0% Clinical Data: No Development Reported Size: 10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg</td>
</tr>
<tr>
<td>Astragaloside IV</td>
<td>HY-N0431</td>
<td>Astragaloside IV, an active component isolated from Astragalus membranaceus, suppresses the activation of ERK1/2 and JNK, and downregulates matrix metalloproteinases (MMP)-2, (MMP)-9 in MDA-MB-231 breast cancer cells. Purity: &gt;98.0% Clinical Data: No Development Reported Size: 10 mM × 1 mL, 10 mg, 50 mg, 100 mg</td>
</tr>
<tr>
<td>AZD-0364</td>
<td>HY-111483</td>
<td>AZD-0364 is a potent and selective ERK2 inhibitor extracted from patent WO201708979A1, compound example 1A, has an IC\textsubscript{50} of 0.6 nM. Purity: 99.75% Clinical Data: No Development Reported Size: 10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg</td>
</tr>
<tr>
<td>BAY885</td>
<td>HY-112082</td>
<td>BAY885 is a novel ERK5 inhibitor. Purity: 99.01% Clinical Data: No Development Reported Size: 10 mM × 1 mL, 2 mg, 5 mg, 10 mg, 25 mg, 50 mg</td>
</tr>
<tr>
<td>BIX02188</td>
<td>HY-12055</td>
<td>BIX02188 is a potent MEK5-selective inhibitor with an IC\textsubscript{50} of 4.3 nM. BIX02188 inhibits ERK5 catalytic activity, with an IC\textsubscript{50} of 810 nM. Purity: 99.49% Clinical Data: No Development Reported Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg</td>
</tr>
<tr>
<td>Cafestol</td>
<td>HY-N6257</td>
<td>Cafestol, one of the major components of coffee, is a coffee-specific diterpene from. Cafestol is a ERK inhibitor for AP-1-targeted activity against PGE\textsubscript{2} production and the mRNA expression of cyclooxygenase (COX)-2 in LPS-activated RAW264.7 cells. Purity: &gt;98% Clinical Data: No Development Reported Size: 5 mg, 10 mg, 20 mg</td>
</tr>
<tr>
<td>CC-90003</td>
<td>HY-112570</td>
<td>CC-90003 is an irreversible and selective inhibitor of ERK 1/2 with antitumor activity. Purity: 99.84% Clinical Data: No Development Reported Size: 10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg</td>
</tr>
</tbody>
</table>

Asperulosidic Acid

Asperulosidic Acid (ASPA), a bioactive iridoid glycoside, is extracted from the herbs of Hedyaonthis diffusa Willd. Asperulosidic Acid (ASPA) has anti-tumor, anti-oxidant, and anti-inflammatory activities. Purity: >98% Clinical Data: No Development Reported Size: 5 mg, 10 mg

AX-15836

AX-15836 is a potent and selective ERK5 inhibitor with an IC\textsubscript{50} of 8 nM. Purity: 98.95% Clinical Data: No Development Reported Size: 10 mM × 1 mL, 2 mg, 5 mg, 10 mg, 25 mg, 50 mg

HY-12056

BIX02189 is a potent and selective MEK5 inhibitor with an IC\textsubscript{50} of 1.5 nM. BIX02189 also inhibits ERK5 catalytic activity with an IC\textsubscript{50} of 59 nM. Purity: 99.99% Clinical Data: No Development Reported Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg
**Chicanine**

Chicanine is a lignan compound of *Schisandra chinensis*, inhibits LPS-induced phosphorylation of p38 MAPK, ERK 1/2 and IκB-α, with anti-inflammatory activity.

- **Purity:** >98%
- **Clinical Data:** No Development Reported
- **Size:** 1 mg, 5 mg

**ChPG**

ChPG is a selective mGluR5 agonist, and attenuates SO₂-induced oxidative stress and inflammation through TSG-6/NF-κB pathway in BV2 microglial cells.

- **Purity:** >98%
- **Clinical Data:** No Development Reported
- **Size:** 1 mg, 5 mg

**Corynosome**

Corynosome, isolated from the hook of *Uncaria rhynchophylla*, is a potent ERK1/ERK2 inhibitor of key PDGF-BB-induced vascular smooth muscle cells (VSMCs) proliferation.

- **Purity:** 99.91%
- **Clinical Data:** No Development Reported
- **Size:** 10 mM × 1 mL, 5 mg, 10 mg

**DEL-22379**

DEL-22379 is an ERK dimerization Inhibitor. DEL-22379 readily binds to ERK2 with a Ki estimated in the low micromolar range, though binding is detectable even at low nanomolar concentrations. ERK2 dimerization is progressively inhibited with an ICso of ~0.5 μM.

- **Purity:** 99.73%
- **Clinical Data:** No Development Reported
- **Size:** 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

**Enniatin B1**

Enniatin B1 is a Fusarium mycotoxin. Enniatin B1 inhibits acyl-CoA: cholesterol acyltransferase (ACAT) activity with an ICso of 73 μM in an enzyme assay using rat liver microsomes. Enniatin B1 crosses the blood-brain barrier.

- **Purity:** >98%
- **Clinical Data:** No Development Reported
- **Size:** 1 mg, 5 mg

**Enniatin A1**

Enniatin A1 isolated from *Fusarium mycotoxins* is a cyclic hexadepsipeptide consisting of alternating D-α-hydroxyisovaleric acids and N-methyl-L-amino acids.

- **Purity:** >98%
- **Clinical Data:** No Development Reported
- **Size:** 1 mg, 5 mg

**Enniatin B**

Enniatin B is a Fusarium mycotoxin. Enniatin B inhibits acyl-CoA: cholesterol acyltransferase (ACAT) activity with an ICso of 113 μM in an enzyme assay using rat liver microsomes. Enniatin B decreases the activation of ERK (p44/p42).

- **Purity:** >98%
- **Clinical Data:** No Development Reported
- **Size:** 1 mg, 5 mg

**ERK-IN-1**

ERK-IN-1 (compound B) is a RAF and ERK1/2 inhibitor in the treatment of a proliferative disease characterized by activating mutations in the MAPK pathway.

- **Purity:** >98%
- **Clinical Data:** No Development Reported
- **Size:** 100 mg, 250 mg, 500 mg
**ERK-IN-2**

Cat. No.: HY-133084

ERK-IN-2 is a potent, highly selective and orally active ERK2 inhibitor probe with an IC\textsubscript{50} value of 1.8 nM. ERK-IN-2 might lead to off-target toxicity and/or off-target activity at dose >10 μM.

Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

**ERK2 IN-1**

Cat. No.: HY-112300

ERK2 IN-1 is a selective ERK2 inhibitor with an IC\textsubscript{50} of 7 nM.

Purity: >98%
Clinical Data: No Development Reported
Size: 100 mg, 250 mg, 500 mg

**ERK5-IN-2**

Cat. No.: HY-128341

ERK5-IN-2 is an orally active, sub-micromolar, selective ERK5 inhibitor with IC\textsubscript{50} of 0.82 μM; 3 μM for ERK5 and ERK5-ME2ZD, respectively. ERK5-IN-2 does not interact with the BRD4 bromodomain.

Purity: 98.67%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

**Honokiol (NSC 293100)**

Cat. No.: HY-N0003

Honokiol is a bioactive, biphenolic phytochemical that possesses potent antioxidant, anti-inflammatory, antiangiogenic, and anticancer activities by targeting a variety of signaling molecules.

Purity: 99.90%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 50 mg, 100 mg, 200 mg

**KO-947**

Cat. No.: HY-112181

KO-947 is a potent and selective inhibitor of ERK1/2 kinases with potential clinical utility in MAPK pathway dysregulated tumors.

Purity: 98.36%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

**ERK1/2 inhibitor 1**

Cat. No.: HY-112287

ERK1/2 inhibitor 1 is a potent, orally bioavailable ERK1/2 inhibitor, showing 60% inhibition at 1 nM and an IC\textsubscript{50} of 3.0 nM against ERK1 and ERK2, respectively.

Purity: >98%
Clinical Data: No Development Reported
Size: 100 mg, 250 mg, 500 mg

**ERK5-IN-1**

Cat. No.: HY-14403

ERK5-IN-1 is a potent ERK5 inhibitor with an IC\textsubscript{50} of 87±7 nM. ERK5-IN-1 also inhibits LRRK2(G2019S) with an IC\textsubscript{50} of 26 nM.

Purity: 98.38%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

**FR 180204**

Cat. No.: HY-12275

FR 180204 is an ATP-competitive and selective ERK inhibitor. FR 180204 inhibits ERK1 and ERK2 with IC\textsubscript{50} of 0.51 μM (K\textsubscript{i}=0.31 μM) and 0.33 μM (K\textsubscript{i}=0.14 μM), respectively.

Purity: 99.59%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg

**JWG-071**

Cat. No.: HY-108886

JWG-071 is the first reported kinase-selective chemical probe for ERK5. JWG-071 improves ERK5 activity and BRD4 selectivity. JWG-071 will be a much-needed chemical probe for deconvoluting ERK5 and BRD4 pharmacology.

Purity: >98%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg

**Lidocaine (Lignocaine)**

Cat. No.: HY-B0185

Lidocaine (Lignocaine) inhibits sodium channels involving complex voltage and using dependence.

Purity: 99.52%
Clinical Data: Launched
Size: 10 mM × 1 mL, 500 mg, 5 g, 10 g
| **Lidocaine hydrochloride**  
(Lignocaine hydrochloride) | Cat. No.: HY-B0185A |
<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>Lidocaine hydrochloride (Lignocaine hydrochloride) inhibits sodium channels involving complex voltage and using dependence.</td>
<td><img src="image" alt="Lidocaine hydrochloride" /></td>
</tr>
<tr>
<td><strong>Purity:</strong></td>
<td>99.95%</td>
</tr>
<tr>
<td><strong>Clinical Data:</strong></td>
<td>Launched</td>
</tr>
<tr>
<td><strong>Size:</strong></td>
<td>10 mM × 1 mL, 500 mg, 5 g, 10 g</td>
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</table>

<table>
<thead>
<tr>
<th><strong>LM22B-10</strong></th>
<th>Cat. No.: HY-104047</th>
</tr>
</thead>
<tbody>
<tr>
<td>LM22B-10 is an activator of TrkB/TrkC neurotrophin receptor, and can induce TrkB, TrkC, AKT and ERK activation in vitro and in vivo.</td>
<td><img src="image" alt="LM22B-10" /></td>
</tr>
<tr>
<td><strong>Purity:</strong></td>
<td>98.81%</td>
</tr>
<tr>
<td><strong>Clinical Data:</strong></td>
<td>No Development Reported</td>
</tr>
<tr>
<td><strong>Size:</strong></td>
<td>10 mM × 1 mL, 2 mg, 5 mg, 10 mg, 50 mg, 100 mg</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Longdaysin</strong></th>
<th>Cat. No.: HY-18285</th>
</tr>
</thead>
<tbody>
<tr>
<td>Longdaysin is a inhibitor of the Wnt/β-catenin signaling pathway, which exerts antitumor effect through blocking CK16α-dependent Wnt signaling. Longdaysin inhibits CK1α, CK1δ, CDK7, and ERK2 with IC_{50} of 5.6 µM, 8.8 µM, 29 µM, and 52 µM, respectively.</td>
<td><img src="image" alt="Longdaysin" /></td>
</tr>
<tr>
<td><strong>Purity:</strong></td>
<td>99.92%</td>
</tr>
<tr>
<td><strong>Clinical Data:</strong></td>
<td>No Development Reported</td>
</tr>
<tr>
<td><strong>Size:</strong></td>
<td>10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg</td>
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<thead>
<tr>
<th><strong>LY3214996</strong></th>
<th>Cat. No.: HY-101494</th>
</tr>
</thead>
<tbody>
<tr>
<td>LY3214996 is a highly selective inhibitor of ERK1 and ERK2, with IC_{50} of 5 nM for both enzymes in biochemical assays. LY3214996 potently inhibits cellular p-RSK1 in BRAF and RAS mutant cancer cell lines. LY3214996 shows potent antitumor activities in cancer models with MAPK pathway alterations.</td>
<td><img src="image" alt="LY3214996" /></td>
</tr>
<tr>
<td><strong>Purity:</strong></td>
<td>99.87%</td>
</tr>
<tr>
<td><strong>Clinical Data:</strong></td>
<td>No Development Reported</td>
</tr>
<tr>
<td><strong>Size:</strong></td>
<td>10 mM × 1 mL, 1 mg, 5 mg, 10 mg, 50 mg, 100 mg</td>
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</tbody>
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<table>
<thead>
<tr>
<th><strong>Magnololin</strong></th>
<th>Cat. No.: HY-N1374</th>
</tr>
</thead>
<tbody>
<tr>
<td>Magnololin, a major component of Magnolia flos (Shin-Y), inhibits the Ras/ERKs/RSK2 signaling axis by targeting the active pocket of ERK1 and ERK2 with IC_{50} of 87 nM and 16.5 nM, respectively.</td>
<td><img src="image" alt="Magnololin" /></td>
</tr>
<tr>
<td><strong>Purity:</strong></td>
<td>99.98%</td>
</tr>
<tr>
<td><strong>Clinical Data:</strong></td>
<td>No Development Reported</td>
</tr>
<tr>
<td><strong>Size:</strong></td>
<td>10 mM × 1 mL, 5 mg</td>
</tr>
</tbody>
</table>

| **Methylnissolin**  
(Astrapterocarpan) | Cat. No.: HY-N2484 |
<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Methylnissolin (Astrapterocarpan), isolated from Astragalus membranaceus, inhibits platelet-derived growth factor (PDGF)-BB-induced cell proliferation with an IC_{50} of 10 µM.</td>
<td><img src="image" alt="Methylnissolin" /></td>
</tr>
<tr>
<td><strong>Purity:</strong></td>
<td>&gt;98%</td>
</tr>
<tr>
<td><strong>Clinical Data:</strong></td>
<td>No Development Reported</td>
</tr>
<tr>
<td><strong>Size:</strong></td>
<td>1 mg, 5 mg</td>
</tr>
</tbody>
</table>

| **Methylthiouracil**  
(MTU) | Cat. No.: HY-0513 |
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>Methylthiouracil is an antithyroid agent. Methylthiouracil suppresses the production TNF-α and IL-6, and the activation of NF-κB and ERK1/2.</td>
<td><img src="image" alt="Methylthiouracil" /></td>
</tr>
<tr>
<td><strong>Purity:</strong></td>
<td>&gt;98.0%</td>
</tr>
<tr>
<td><strong>Clinical Data:</strong></td>
<td>Launched</td>
</tr>
<tr>
<td><strong>Size:</strong></td>
<td>10 mM × 1 mL, 50 mg, 100 mg</td>
</tr>
</tbody>
</table>

| **MK-8353**  
(SCH900353) | Cat. No.: HY-111407 |
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>MK-8353 (SCH900353) is a potent, selective and orally available ERK1/2 inhibitor, with IC_{50} of 23.0 nM and 8.8 nM, respectively; MK-8353 has antitumor activity.</td>
<td><img src="image" alt="MK-8353" /></td>
</tr>
<tr>
<td><strong>Purity:</strong></td>
<td>98.79%</td>
</tr>
<tr>
<td><strong>Clinical Data:</strong></td>
<td>No Development Reported</td>
</tr>
<tr>
<td><strong>Size:</strong></td>
<td>10 mM × 1 mL, 5 mg, 10 mg, 50 mg</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Mogrol</strong></th>
<th>Cat. No.: HY-N2312</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mogrol is a biometabolite of mogrosides, and acts via inhibition of the ERK1/2 and STAT3 pathways, or reducing CREB activation and activating AMPK signaling.</td>
<td><img src="image" alt="Mogrol" /></td>
</tr>
<tr>
<td><strong>Purity:</strong></td>
<td>98.06%</td>
</tr>
<tr>
<td><strong>Clinical Data:</strong></td>
<td>No Development Reported</td>
</tr>
<tr>
<td><strong>Size:</strong></td>
<td>10 mM × 1 mL, 1 mg, 5 mg, 10 mg, 25 mg</td>
</tr>
<tr>
<td>Chemical Name</td>
<td>Cat. No.</td>
</tr>
<tr>
<td>---------------------------------------------------</td>
<td>---------------</td>
</tr>
<tr>
<td>Muramyl dipeptide (MDP)</td>
<td>HY-127090</td>
</tr>
<tr>
<td>Pachymic acid (3-O-Acetylumuloseic acid)</td>
<td>HY-N0371</td>
</tr>
<tr>
<td>Pluripotin (SC1)</td>
<td>HY-10579</td>
</tr>
<tr>
<td>Ravoxertinib (GDC-0994)</td>
<td>HY-15947</td>
</tr>
<tr>
<td>Ravoxertinib hydrochloride (GDC-0994 hydrochloride)</td>
<td>HY-15947A</td>
</tr>
<tr>
<td>Tauroursodeoxycholate (TUDCA; UR 906; Taurolite)</td>
<td>HY-19696</td>
</tr>
<tr>
<td>Omtriptolide</td>
<td>HY-16363</td>
</tr>
<tr>
<td>SCH772984</td>
<td>HY-50846</td>
</tr>
<tr>
<td>Tauroursodeoxycholate dihydrate</td>
<td>HY-196968</td>
</tr>
</tbody>
</table>

**Muramyl dipeptide (MDP)**
- **Cat. No.:** HY-127090
- **Muramyl dipeptide (MDP)** is a synthetic immunoreactive peptide, consisting of N-acetyl muramic acid attached to a short amino acid chain of L-Ala-D-isoGln. Muramyl dipeptide is an inducer of bone formation through induction of Runx2.
- **Purity:** >98%
- **Clinical Data:** No Development Reported
- **Size:** 1 mg, 5 mg

**Pachymic acid (3-O-Acetylumuloseic acid)**
- **Cat. No.:** HY-N0371
- **Pachymic acid** is a lanostane-type triterpenoid from P. cocos. Pachymic acid inhibits Akt and ERK signaling pathways.
- **Purity:** >99.0%
- **Clinical Data:** No Development Reported
- **Size:** 10 mM × 1 mL, 5 mg, 10 mg, 50 mg

**Pluripotin (SC1)**
- **Cat. No.:** HY-10579
- **Pluripotin** is a dual inhibitor of ERK1 and RasGAP with IC₅₀ of 98 nM and 212 nM, respectively. Pluripotin also inhibits RSK1, RSK2, RSK3, and RSK4 with IC₅₀ of 0.5, 2.5, 3.3, and 10.0 µM, respectively.
- **Purity:** 98.86%
- **Clinical Data:** No Development Reported
- **Size:** 10 mM × 1 mL, 2 mg, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

**Ravoxertinib (GDC-0994)**
- **Cat. No.:** HY-15947
- **Ravoxertinib (GDC-0994)** is an orally bioavailable ERK kinase inhibitor with an IC₅₀ of 6.1 nM and 3.1 nM for ERK1 and ERK2, respectively.
- **Purity:** 99.79%
- **Clinical Data:** Phase 1
- **Size:** 10 mM × 1 mL, 5 mg, 10 mg, 50 mg

**Ravoxertinib hydrochloride (GDC-0994 hydrochloride)**
- **Cat. No.:** HY-15947A
- **Ravoxertinib hydrochloride (GDC-0994 hydrochloride)** is an orally bioavailable inhibitor selective for ERK kinase activity with IC₅₀ of 6.1 nM and 3.1 nM for ERK1 and ERK2, respectively.
- **Purity:** 99.05%
- **Clinical Data:** Phase 1
- **Size:** 10 mM × 1 mL, 5 mg, 10 mg, 50 mg

**Tauroursodeoxycholate (TUDCA; UR 906; Taurolite)**
- **Cat. No.:** HY-19696
- **Tauroursodeoxycholate** is an endoplasmic reticulum (ER) stress inhibitor. Tauroursodeoxycholate significantly reduces expression of apoptosis molecules, such as caspase-3 and caspase-12. Tauroursodeoxycholate also inhibits ERK.
- **Purity:** >98%
- **Clinical Data:** No Development Reported
- **Size:** 50 mg

**Omtriptolide**
- **Cat. No.:** HY-16363
- **Omtriptolide** (PG490-88) is a water soluble derivative prodrug of triptolide purified from the Chinese herb.
- **Purity:** 98.29%
- **Clinical Data:** No Development Reported
- **Size:** 10 mM × 1 mL, 1 mg, 5 mg, 10 mg, 25 mg

**SCH772984**
- **Cat. No.:** HY-50846
- **SCH772984** is a highly selective and ATP-competitive ERK inhibitor, with IC₅₀ of 4 and 1 nM for ERK1 and ERK2, respectively. SCH772984 has antitumor activity in MAPK inhibitor-naïve and MAPK inhibitor-resistant cells containing BRAF or RAS mutations.
- **Purity:** 99.53%
- **Clinical Data:** No Development Reported
- **Size:** 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg, 200 mg

**Tauroursodeoxycholate dihydrate (TUDCA dihydrate; UR 906 dihydrate; Taurolite dihydrate)**
- **Cat. No.:** HY-196968
- **Tauroursodeoxycholate dihydrate** is an endoplasmic reticulum (ER) stress inhibitor. Tauroursodeoxycholate dihydrate significantly reduces expression of apoptosis molecules, such as caspase-3 and caspase-12.
- **Purity:** >97.0%
- **Clinical Data:** Launched
- **Size:** 10 mM × 1 mL, 50 mg
<table>
<thead>
<tr>
<th><strong>Taouroursodeoxycholate Sodium</strong> <em>(Sodium taouroursodeoxycholate; Taouroursodeoxycholic acid sodium salt)</em></th>
<th><strong>Cat. No.:</strong> HY-19696A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taouroursodeoxycholate Sodium is an endoplasmic reticulum (ER) stress inhibitor. Taouroursodeoxycholate significantly reduces expression of apoptosis molecules, such as caspase-3 and caspase-12. Taouroursodeoxycholate also inhibits ERK.</td>
<td></td>
</tr>
<tr>
<td><strong>Purity:</strong> 97.07%</td>
<td></td>
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<tr>
<td><strong>Clinical Data:</strong> Launched</td>
<td></td>
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<td><strong>Size:</strong> 10 mM × 1 mL, 100 mg, 500 mg</td>
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<table>
<thead>
<tr>
<th><strong>TBHQ</strong> <em>(tert-Butylhydroquinone)</em></th>
<th><strong>Cat. No.:</strong> HY-100489</th>
</tr>
</thead>
<tbody>
<tr>
<td>TBHQ (tert-Butylhydroquinone) is a widely used antioxidant, protects against Doxorubicin (DOX)-induced cardiotoxicity through activation of Nrf2.</td>
<td></td>
</tr>
<tr>
<td><strong>Purity:</strong> &gt;98.0%</td>
<td></td>
</tr>
<tr>
<td><strong>Clinical Data:</strong> No Development Reported</td>
<td></td>
</tr>
<tr>
<td><strong>Size:</strong> 10 mM × 1 mL, 50 mg, 100 mg, 200 mg</td>
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</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Theaflavin 3,3’-digallate (TF3)</strong></th>
<th><strong>Cat. No.:</strong> HY-N1992</th>
</tr>
</thead>
<tbody>
<tr>
<td>Theaflavin 3,3’-digallate (TF3), the typical pigment in black tea, is a good antitumor agent.</td>
<td></td>
</tr>
<tr>
<td><strong>Purity:</strong> 98.70%</td>
<td></td>
</tr>
<tr>
<td><strong>Clinical Data:</strong> No Development Reported</td>
<td></td>
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<tr>
<td><strong>Size:</strong> 10 mM × 1 mL, 5 mg, 10 mg</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Ulixertinib</strong> <em>(BVD-523; VRT752271)</em></th>
<th><strong>Cat. No.:</strong> HY-15816</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ulixertinib (BVD-523; VRT752271) is a potent, orally active, highly selective, ATP-competitive and reversible covalent inhibitor of ERK1/2 kinases, with an IC₅₀ of &lt;0.3 nM against ERK2.</td>
<td></td>
</tr>
<tr>
<td><strong>Purity:</strong> 99.87%</td>
<td></td>
</tr>
<tr>
<td><strong>Clinical Data:</strong> No Development Reported</td>
<td></td>
</tr>
<tr>
<td><strong>Size:</strong> 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg, 200 mg</td>
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</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Urolithin B</strong></th>
<th><strong>Cat. No.:</strong> HY-126307</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urolithin B is one of the gut microbial metabolites of ellagitannins, and has anti-inflammatory and antioxidant effects.</td>
<td></td>
</tr>
<tr>
<td><strong>Purity:</strong> 99.86%</td>
<td></td>
</tr>
<tr>
<td><strong>Clinical Data:</strong> No Development Reported</td>
<td></td>
</tr>
<tr>
<td><strong>Size:</strong> 10 mM × 1 mL, 10 mg, 50 mg, 100 mg</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Urolithin B hydrochloride</strong> <em>(BVD-523 hydrochloride; VRT752271 hydrochloride)</em></th>
<th><strong>Cat. No.:</strong> HY-15816A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urolithin B hydrochloride (BVD-523 hydrochloride) is a potent, orally active, highly selective, ATP-competitive and reversible covalent inhibitor of ERK1/2 kinases, with an IC₅₀ of &lt;0.3 nM against ERK2.</td>
<td></td>
</tr>
<tr>
<td><strong>Purity:</strong> 99.95%</td>
<td></td>
</tr>
<tr>
<td><strong>Clinical Data:</strong> No Development Reported</td>
<td></td>
</tr>
<tr>
<td><strong>Size:</strong> 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>VX-11e</strong></th>
<th><strong>Cat. No.:</strong> HY-14178</th>
</tr>
</thead>
<tbody>
<tr>
<td>VX-11e is a potent, selective, and orally bioavailable inhibitor of ERK with Ki &lt; 2 nM.</td>
<td></td>
</tr>
<tr>
<td><strong>Purity:</strong> 98.68%</td>
<td></td>
</tr>
<tr>
<td><strong>Clinical Data:</strong> No Development Reported</td>
<td></td>
</tr>
<tr>
<td><strong>Size:</strong> 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Xantocillin</strong></th>
<th><strong>Cat. No.:</strong> HY-122404</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xantocillin is a marine agent extracted from Penicillium commune, induces autophagy through inhibition of the MEK/ERK pathway.</td>
<td></td>
</tr>
<tr>
<td><strong>Purity:</strong> &gt;98%</td>
<td></td>
</tr>
<tr>
<td><strong>Clinical Data:</strong> No Development Reported</td>
<td></td>
</tr>
<tr>
<td><strong>Size:</strong> 100 mg, 250 mg, 500 mg</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>XMD17-109</strong></th>
<th><strong>Cat. No.:</strong> HY-15665</th>
</tr>
</thead>
<tbody>
<tr>
<td>XMD17-109 is a novel, specific ERK-5 inhibitor, with an IC₅₀ of 162 nM.</td>
<td></td>
</tr>
<tr>
<td><strong>Purity:</strong> 99.44%</td>
<td></td>
</tr>
<tr>
<td><strong>Clinical Data:</strong> No Development Reported</td>
<td></td>
</tr>
<tr>
<td><strong>Size:</strong> 10 mM × 1 mL, 5 mg, 10 mg, 50 mg</td>
<td></td>
</tr>
</tbody>
</table>
XMD8-92

<table>
<thead>
<tr>
<th>Cat. No.: HY-14443</th>
</tr>
</thead>
</table>

XMD8-92 is a highly selective ERK5/BMK1 inhibitor with dissociation constant ($K_d$) value of 80 nM.

![Chemical structure of XMD8-92](image)

**Purity:** 99.72%
**Clinical Data:** No Development Reported
**Size:** 10 mM × 1 mL, 10 mg, 50 mg, 100 mg
JNK

c-Jun N-terminal kinase

JNKs (c-Jun N-terminal kinases) belong to the mitogen-activated protein kinase family, and are responsive to stress stimuli, such as cytokines, ultraviolet irradiation, heat shock, and osmotic shock. JNKs play a role in T cell differentiation and the cellular apoptosis pathway. Activation occurs through a dual phosphorylation of threonine (Thr) and tyrosine (Tyr) residues within a Thr-Pro-Tyr motif located in kinase subdomain VIII. Activation is carried out by two MAP kinases, MKK4 and MKK7 and JNK can be inactivated by Ser/Thr and Tyr protein phosphatases. Downstream molecules that are activated by JNK include c-Jun, ATF2, ELK1, SMAD4, p53 and HSF1. JNKs can associate with scaffold proteins JNK interacting proteins as well as their upstream kinases JNKK1 and JNKK2 following their activation. JNK activity regulates several important cellular functions including cell growth, differentiation, survival and apoptosis.
# JNK Inhibitors & Activators

<table>
<thead>
<tr>
<th>Inhibitor</th>
<th>Cat. No.</th>
<th>Purity</th>
<th>Clinical Data</th>
<th>Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Actein</td>
<td>HY-N6872</td>
<td>&gt;98%</td>
<td>No Development Reported</td>
<td>5 mg</td>
</tr>
<tr>
<td>As601245</td>
<td>HY-11010</td>
<td>98.32%</td>
<td>No Development Reported</td>
<td>10 mM × 1 mL, 5 mg, 10 mg, 50 mg</td>
</tr>
<tr>
<td>Bentamapimod (AS 602801)</td>
<td>HY-14761</td>
<td>98.60%</td>
<td>No Development Reported</td>
<td>10 mM × 1 mL, 5 mg, 10 mg, 50 mg</td>
</tr>
<tr>
<td>CC-401</td>
<td>HY-13022A</td>
<td>&gt;98%</td>
<td>Phase 1</td>
<td>5 mg, 10 mg, 50 mg</td>
</tr>
<tr>
<td>CC-401 hydrochloride (CC401 HCl)</td>
<td>HY-13022</td>
<td>99.96%</td>
<td>Phase 1</td>
<td>10 mM × 1 mL, 5 mg, 10 mg, 50 mg</td>
</tr>
<tr>
<td>D-JNKi-1 (AM-111; XG-102)</td>
<td>HY-P0069</td>
<td>95.83%</td>
<td>Phase 3</td>
<td>1 mg, 5 mg, 10 mg, 50 mg</td>
</tr>
<tr>
<td>DB07268</td>
<td>HY-15737</td>
<td>99.49%</td>
<td>No Development Reported</td>
<td>10 mM × 1 mL, 5 mg, 10 mg, 50 mg</td>
</tr>
<tr>
<td>DB07268</td>
<td>HY-15737</td>
<td>99.49%</td>
<td>No Development Reported</td>
<td>10 mM × 1 mL, 5 mg, 10 mg, 50 mg</td>
</tr>
</tbody>
</table>

**Actein**
Actein is a triterpene glycoside isolated from the rhizomes of Cimicifuga foetida. Actein suppresses cell proliferation, induces autophagy and apoptosis through promoting ROS/JNK activation, and blunting AKT pathway in human bladder cancer. Actein has little toxicity in vivo.

**Anisomycin** (Flagecidin; Wuningmeisu C)
Anisomycin is a potent protein synthesis inhibitor which interferes with protein and DNA synthesis by inhibiting peptidyl transferase or the 80S ribosome system. Anisomycin is a JNK activator, which increases phospho-JNK.

**As601245**
As601245 is a cell-permeable JNK Inhibitor with IC₅₀ of 150, 220, and 70 nM for three JNK human isoforms (JNK1, JNK2, and JNK3), respectively.

**Astragaloside IV**
Astragaloside IV, an active component isolated from Astragalus membranaceus, suppresses the activation of ERK1/2 and JNK, and down regulates matrix metalloproteinases (MMP)-2, (MMP)-9 in MDA-MB-231 breast cancer cells.

**BI-78D3**
BI-78D3 functions as a substrate competitive inhibitor of JNK, inhibit the JNK kinase activity (IC₅₀=280 nM).

**CC-401 hydrochloride** (CC401 HCl)
CC-401 hydrochloride is a potent inhibitor of all three forms of JNK with Kᵢ of 25 to 50 nM.

**DB07268**
DB07268 is a potent and selective JNK₁ inhibitor with an IC₅₀ value of 9 nM.
DTP3 TFA

Cat. No.: HY-100538A

DTP3 TFA is a potent and selective GADD45β/MKK7 (growth arrest and DNA-damage-inducible β/mitogen-activated protein kinase kinase 7) inhibitor. DTP3 TFA targets an essential, cancer-selective cell-survival module downstream of the NF-κB pathway.

Purity: 98.75%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

Ginsenoside Re

Cat. No.: HY-0044

Ginsenoside Re (Ginsenoside Rb2; Panaxoside Re; Sanchinoside Re) is an extract from Panax notoginseng. Ginsenoside Re decreases the β-amyloid protein (Aβ). Ginsenoside Re plays a role in antiinflammation through inhibition of JNK and NF-κB.

Purity: 98.04%
Clinical Data: Phase 1
Size: 10 mM × 1 mL, 5 mg, 10 mg

IQ-1S free acid

Cat. No.: HY-100233

IQ-1S free acid is a prospective inhibitor of NF-κB (activating protein 1 (AP-1) activity with an IC₅₀ of 2.3±0.41 μM. IQ-1S free acid has binding affinity (Kᵩ values) in the nanomolar range for all three JNKs with Kᵩ of 100 nM, 240 nM, and 360 nM for JNK3, JNK1, and JNK2, respectively.

Purity: 98.58%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

J30-8

Cat. No.: HY-125838

J30-8 is a potent and isoform-selective inhibitor of c-Jun N-terminal kinase 3 (JNK3) with an IC₅₀ of 40 nM, which 2500-fold isoform selectivity against JNK1a1 and JNK2a2. J30-8 exhibits neuroprotective activity in vitro and potential for the treatment of neurodegenerative diseases.

Purity: >98%
Clinical Data: No Development Reported
Size: 100 mg, 250 mg, 500 mg

JNK-IN-7

Cat. No.: HY-15617

JNK-IN-7 is a potent JNK inhibitor with IC₅₀ of 1.5, 2 and 0.7 nM for JNK1, JNK2 and JNK3, respectively.

Purity: 98.05%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

Esculentoside H

Cat. No.: HY-N2205

Esculentoside H (EsH) is a water-soluble saponin isolated and purified from the root extract of perennial plant Phytolacca esculenta. Esculentoside H (EsH) has anti-tumor activity, the mechanism is related to the capacity for TNF release.

Purity: >98%
Clinical Data: No Development Reported
Size: 5 mg, 10 mg

Guggulsterone

Cat. No.: HY-107738

Guggulsterone is a plant sterol derived from the gum resin of the tree Commiphora wightii.

Purity: 99.50%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

Isovitexin

Cat. No.: HY-00773

Isovitexin is a flavonoid isolated from rice hulls of Oryza sativa, possesses anti-inflammatory and anti-oxidant activities. Isovitexin acts like a JNK1/2 inhibitor and inhibits the activation of NF-κB.

Purity: 98.94%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 25 mg

JNK Inhibitor VIII

Cat. No.: HY-107598

JNK Inhibitor VIII (TCS JNK 6o) is a c-Jun N-terminal kinases (JNK-1, -2, -3) inhibitor with IC₅₀ values of 2 nM, 4 nM, 52 nM, respectively, and has IC₅₀ values of 45 nM and 160 nM for JNK-1 and -2, respectively.

Purity: >99.0%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 1 mg, 5 mg

JNK-IN-8

Cat. No.: HY-13319

JNK-IN-8 is a potent JNK inhibitor with IC₅₀ of 4.7 nM, 18.7 nM, and 1 nM for JNK1, JNK2, and JNK3, respectively.

Purity: 99.65%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 2 mg, 5 mg, 10 mg, 50 mg, 100 mg, 200 mg
<table>
<thead>
<tr>
<th><strong>Juglanin</strong></th>
<th><strong>Cat. No.:</strong> HY-N3442</th>
</tr>
</thead>
<tbody>
<tr>
<td>Juglanin is a JNK activator.</td>
<td></td>
</tr>
<tr>
<td><strong>Purity:</strong></td>
<td>&gt;98.0%</td>
</tr>
<tr>
<td><strong>Clinical Data:</strong></td>
<td>No Development Reported</td>
</tr>
<tr>
<td><strong>Size:</strong></td>
<td>10 mM × 1 mL, 1 mg, 5 mg</td>
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</table>

<table>
<thead>
<tr>
<th><strong>L-JNKI-1</strong></th>
<th><strong>Cat. No.:</strong> HY-P0069A</th>
</tr>
</thead>
<tbody>
<tr>
<td>L-JNKI-1 is a cell-permeable peptide inhibitor specific for JNK.</td>
<td></td>
</tr>
<tr>
<td><strong>Purity:</strong></td>
<td>95.50%</td>
</tr>
<tr>
<td><strong>Clinical Data:</strong></td>
<td>No Development Reported</td>
</tr>
<tr>
<td><strong>Size:</strong></td>
<td>1 mg, 5 mg, 10 mg, 50 mg</td>
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<table>
<thead>
<tr>
<th><strong>Loureirin B</strong></th>
<th><strong>Cat. No.:</strong> HY-N1504</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loureirin B, a flavonoid extracted from Dracaena cochinchinensis, is an inhibitor of plasminogen activator inhibitor-1 (PAI-1), with an IC₅₀ of 26.10μM; Loureirin B also inhibits K_ATP, the phosphorylation of ERK and JNK, and has anti-diabetic activity.</td>
<td></td>
</tr>
<tr>
<td><strong>Purity:</strong></td>
<td>99.99%</td>
</tr>
<tr>
<td><strong>Clinical Data:</strong></td>
<td>No Development Reported</td>
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<tr>
<td><strong>Size:</strong></td>
<td>10 mM × 1 mL, 5 mg</td>
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<table>
<thead>
<tr>
<th><strong>MPT0B392</strong></th>
<th><strong>Cat. No.:</strong> HY-101287</th>
</tr>
</thead>
<tbody>
<tr>
<td>MPT0B392, an orally active quinoline derivative, induces c-Jun N-terminal kinase (JNK) activation, leading to apoptosis.</td>
<td></td>
</tr>
<tr>
<td><strong>Purity:</strong></td>
<td>&gt;98%</td>
</tr>
<tr>
<td><strong>Clinical Data:</strong></td>
<td>No Development Reported</td>
</tr>
<tr>
<td><strong>Size:</strong></td>
<td>100 mg, 250 mg, 500 mg</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Muramyl dipeptide (MDP)</strong></th>
<th><strong>Cat. No.:</strong> HY-127090</th>
</tr>
</thead>
<tbody>
<tr>
<td>Muramyl dipeptide (MDP) is a synthetic immunoreactive peptide, consisting of N-acetyl muramic acid attached to a short amino acid chain of L-Ala-D-isoGln. Muramyl dipeptide is an inducer of bone formation through induction of Runx2.</td>
<td></td>
</tr>
<tr>
<td><strong>Purity:</strong></td>
<td>&gt;98%</td>
</tr>
<tr>
<td><strong>Clinical Data:</strong></td>
<td>No Development Reported</td>
</tr>
<tr>
<td><strong>Size:</strong></td>
<td>1 mg, 5 mg</td>
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</table>

<table>
<thead>
<tr>
<th><strong>Polyphillin I</strong></th>
<th><strong>Cat. No.:</strong> HY-N0047</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polyphillin I is a bioactive constituent extracted from Paris polyphylla, has strong anti-tumor activity. Polyphillin I is an activator of the JNK signaling pathway and is an inhibitor of PDK1/Akt/mTOR signaling. Polyphillin I induces autophagy, G2/M phase arrest and apoptosis.</td>
<td></td>
</tr>
<tr>
<td><strong>Purity:</strong></td>
<td>&gt;98%</td>
</tr>
<tr>
<td><strong>Clinical Data:</strong></td>
<td>No Development Reported</td>
</tr>
<tr>
<td><strong>Size:</strong></td>
<td>5 mg, 10 mg, 20 mg</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Salicortin</strong></th>
<th><strong>Cat. No.:</strong> HY-123503</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salicortin, a phenolic glycoside, has been isolated from many plants such as Populus and Salix species. Salicortin inhibits osteoclast differentiation and bone resorption by down-regulating JNK and NF-κB/NFATc1 signaling pathways.</td>
<td></td>
</tr>
<tr>
<td><strong>Purity:</strong></td>
<td>&gt;98%</td>
</tr>
<tr>
<td><strong>Clinical Data:</strong></td>
<td>No Development Reported</td>
</tr>
<tr>
<td><strong>Size:</strong></td>
<td>100 mg, 250 mg, 500 mg</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>SP600125</strong></th>
<th><strong>Cat. No.:</strong> HY-12041</th>
</tr>
</thead>
<tbody>
<tr>
<td>SP600125 is a cell-permeable, reversible, and ATP-competitive JNK inhibitor with IC₅₀ of 40, 40 and 90 nM for JNK1, JNK2 and JNK3, respectively.</td>
<td></td>
</tr>
<tr>
<td><strong>Purity:</strong></td>
<td>98.82%</td>
</tr>
<tr>
<td><strong>Clinical Data:</strong></td>
<td>No Development Reported</td>
</tr>
<tr>
<td><strong>Size:</strong></td>
<td>10 mM × 1 mL, 10 mg, 50 mg, 100 mg, 200 mg, 500 mg</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>SR-3306</strong></th>
<th><strong>Cat. No.:</strong> HY-12829</th>
</tr>
</thead>
<tbody>
<tr>
<td>SR-3306 is a selective, potent, highly brain penetrant JNK inhibitor.</td>
<td></td>
</tr>
<tr>
<td><strong>Purity:</strong></td>
<td>99.00%</td>
</tr>
<tr>
<td><strong>Clinical Data:</strong></td>
<td>No Development Reported</td>
</tr>
<tr>
<td><strong>Size:</strong></td>
<td>10 mM × 1 mL, 5 mg, 10 mg</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Tanzisertib (CC-930)</strong></th>
<th><strong>Cat. No.:</strong> HY-15405</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tanzisertib (CC-930) is a potent JNK1/2/3 inhibitor with IC₅₀ of 61/7/6 nM, respectively.</td>
<td></td>
</tr>
<tr>
<td><strong>Purity:</strong></td>
<td>99.92%</td>
</tr>
<tr>
<td><strong>Clinical Data:</strong></td>
<td>Phase 2</td>
</tr>
<tr>
<td><strong>Size:</strong></td>
<td>10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg</td>
</tr>
</tbody>
</table>
TCS JNK 5a

\((\text{JNK Inhibitor IX})\)

Cat. No.: HY-15881

TCS JNK 5a is a potent JNK3 inhibitor with a \(pIC_{50}\) of 6.7. TCS JNK 5a also inhibits JNK2 with a \(pIC_{50}\) of 6.5.

Purity: 98.06%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 10 mg, 50 mg

Tomatidine

Cat. No.: HY-N2149

Tomatidine acts as an anti-inflammatory agent by blocking NF-κB and JNK signaling.

Purity: >98.0%
Clinical Data: No Development Reported
Size: 25 mg, 50 mg, 100 mg

Urolithin B

Cat. No.: HY-126307

Urolithin B is one of the gut microbial metabolites of ellagitannins, and has anti-inflammatory and antioxidant effects.

Purity: 99.86%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 10 mg, 50 mg, 100 mg

WHI-P258

Cat. No.: HY-108419

WHI-P258, a quinazoline compound, binds to the active site of JAK3 with an estimated \(K_i\) of 72 \(\mu\)M. WHI-P258 does not inhibit JAK3 and does not affect the thrombin-induced aggregation of platelets even at 100 \(\mu\)M.

Purity: 99.80%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 2 mg, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg
KLF
Krüppel-like factor

Krüppel-like factor (KLF) family members share a three C2H2 zinc finger DNA binding domain, and are involved in cell proliferation and differentiation control in normal as in pathological situations. KLFs can be deregulated in multiple cancers either by loss of heterozygosity (LOH), somatic mutation or transcriptional silencing by promoter hypermethylation.

KLF family member proteins play a critical role in the growth and metastasis of numerous tumor types, at least in part by regulating the expression of cell cycle genes. Globally, KLF4 and KLF6 are considered as tumor suppressor gene, whereas KLF5 promotes cell proliferation. Family members have different transcriptional properties and can modulate each other’s activity by a variety of mechanisms. Since cells can express multiple KLFs, KLF transcription factors build likely a transcriptional network to control cell proliferation. Effects of changes in KLF factors are context-dependent and can appear contradictory, considering differences in the expression profile of family members in various cells. Last, KLF variants may antagonize the function of wild type proteins.
KLF Inhibitors & Activators

**APTO-253**
(Cat. No.: HY-16291)

APTO-253 is a small molecule that inhibits c-Myc expression, stabilizes G-quadruplex DNA, and induces cell cycle arrest and apoptosis in acute myeloid leukemia cells. APTO-253 mediates anticancer activity through induction of the Krüppel-like factor 4 (KLF4) tumor suppressor.

- **Purity:** 96.80%
- **Clinical Data:** Phase 1
- **Size:** 10 mM x 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

**ML264**
(Cat. No.: HY-19994)

ML264 is an antitumor agent that potently and selectively inhibits Krüppel-like factor 5 (KLF5) expression.

- **Purity:** 99.67%
- **Clinical Data:** No Development Reported
- **Size:** 10 mM x 1 mL, 5 mg, 10 mg, 50 mg, 100 mg
MAP3K

MAP kinase kinase, MEKK, MAPKKK

MAP3Ks (Mitogen-activated protein kinase kinase kinases), the top components of MAPK cascades, modulate many biological processes, such as growth, development and various environmental stresses. Based on the sequence of their kinase catalytic domain, MAP3Ks are classified into three groups: the MEKK-like, ZIK-like and Raf-like families. Raf-like MAP3Ks constitute largest MAP3K subfamily. Raf-like MAP3Ks play roles in response to biotic and abiotic stresses.

MAP3Ks often bind to both MAP4Ks and MAP2Ks in the same pathway. For example, MEKK1 (MAP3K1) binds to both the MAP4K NJK and the MAP2K MKK4, while NSY-1 (MAP3K) binds to the MAP2K SEK-1. MAP3Ks activates MAP2Ks by phosphorylation of a serine and/or threonine, and MAP2Ks activate MAPKs by dual phosphorylation of a Thr-X-Tyr motif.
## MAP3K Inhibitors

### SZ-7-Oxozeaenol
*Cat. No.: HY-12686*

SZ-7-Oxozeaenol is a natural anti-protozoan compound from fungal origin, acting as a potent irreversible and selective inhibitor of TAK1 and VEGF-R2, with IC₅₀ of 8 nM and 52 nM, respectively.

- **Purity:** >99.0%
- **Clinical Data:** No Development Reported
- **Size:** 10 mM × 1 mL, 1 mg, 5 mg, 10 mg, 50 mg, 100 mg

### Cot inhibitor-1
*Cat. No.: HY-32015*

Cot inhibitor-1 is a COT/Tpl2 inhibitor.

- **Purity:** 95.25%
- **Clinical Data:** No Development Reported
- **Size:** 10 mM × 1 mL, 2 mg, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

### Cot inhibitor-2
*Cat. No.: HY-32018*

Cot inhibitor-2 is a COT/Tpl2 inhibitor.

- **Purity:** 99.22%
- **Clinical Data:** No Development Reported
- **Size:** 10 mM × 1 mL, 2 mg, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

### GNE-3511
*Cat. No.: HY-12947*

GNE-3511 is a dual leucine zipper kinase (DLK) inhibitor with a Kᵢ of 0.5 nM.

- **Purity:** 99.98%
- **Clinical Data:** No Development Reported
- **Size:** 10 mM × 1 mL, 1 mg, 5 mg, 10 mg, 50 mg, 100 mg, 200 mg

### GNE-8505
*Cat. No.: HY-114332*

GNE-8505 is an orally available inhibitor of Dual leucine zipper kinase (DLK).

- **Purity:** >98%
- **Clinical Data:** No Development Reported
- **Size:** 100 mg, 250 mg, 500 mg

### GS-444217
*Cat. No.: HY-100844*

GS-444217 is a potent, orally available and selective ATP-competitive inhibitor of apoptosis signal-regulating kinase 1 (ASK1) with an IC₅₀ of 2.87 nM.

- **Purity:** 99.80%
- **Clinical Data:** No Development Reported
- **Size:** 10 mM × 1 mL, 1 mg, 5 mg, 10 mg, 50 mg, 100 mg

### NG25
*Cat. No.: HY-15434*

NG25 is a potent dual TAK1 and MAP4K2 inhibitor, with IC₅₀ of 149 nM and 21.7 nM, respectively.

- **Purity:** 99.45%
- **Clinical Data:** No Development Reported
- **Size:** 10 mM × 1 mL, 1 mg, 5 mg, 10 mg

### NQDI-1
*Cat. No.: HY-19566*

NQDI-1 inhibits apoptosis signal-regulating kinase 1 (ASK1) with a Kᵢ of 500 nM and an IC₅₀ of 3 μM.

- **Purity:** 95.93%
- **Clinical Data:** No Development Reported
- **Size:** 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

### Selonsertib
*Cat. No.: HY-18938*

Selonsertib, an orally bioavailable, selective apoptosis signal-regulating kinase 1 (ASK1) inhibitor with a pIC₅₀ of 8.3, has been evaluated as an experimental treatment for diabetic nephropathy and kidney fibrosis.

- **Purity:** 99.12%
- **Clinical Data:** Phase 2
- **Size:** 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg, 200 mg
<table>
<thead>
<tr>
<th>Compound</th>
<th>Cat. No.</th>
<th>Description</th>
</tr>
</thead>
</table>
| TAK1/MAP4K2 inhibitor 1 | HY-77251 | TAK1/MAP4K2 inhibitor 1 is a potent dual TGFβ-activated kinase 1 (TAK1) and mitogen-activated protein kinase kinase kinase 2 (MAP4K2) inhibitor, with IC_{50} of 41.1 nM and 18.2 nM, respectively.  

Purity: 99.70%  
Clinical Data: No Development Reported  
Size: 10 nM × 1 mL, 5 mg, 10 mg, 50 mg |
| Takinib | HY-103490 | Takinib is a potent and selective TAK1 inhibitor with an IC_{50} of 9.5 nM, which inhibits autophosphorylated and non-phosphorylated TAK1 that binds within the ATP-binding pocket and inhibits by slowing down the rate-limiting step of TAK1 activation.  

Purity: 98.00%  
Clinical Data: No Development Reported  
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg |
| TC ASK 10 | HY-103258 | TC ASK 10 (Compound 10) is a potent, selective and orally active apoptosis signal-regulating kinase 1 (ASK1) inhibitor with an IC_{50} of 14 nM. The inhibitory activities of TC ASK 10 towards other representative panel of kinases are less than 50%, except for ASK2 (IC_{50} of 0.51 μM).  

Purity: >98%  
Clinical Data: No Development Reported  
Size: 10 nM × 1 mL, 5 mg, 10 mg, 25 mg |
| Tpl2 Kinase Inhibitor 1 | HY-12358 | Tpl2 Kinase Inhibitor 1 (Compound 1) is a potent and selective Tpl2 (COT kinase, MAP3K8) inhibitor, plays an important role in the regulation of the inflammatory response and the progression of some cancers.  

Purity: >99.0%  
Clinical Data: No Development Reported  
Size: 10 mM × 1 mL, 5 mg |
MAP4Ks (Mitogen-activated protein kinase kinase kinase kinases) belong to the mammalian Ste20-like family of serine/threonine kinases. MAP4K family members, including Hematopoietic progenitor kinase 1 (HPK1/MAP4K1), Germinal centre kinase (GCK/MAP4K2), Germinal centre kinase-like kinase (GLK/MAP4K3), HPK/GCK-like kinase (HGK/MAP4K4), Misshapen-like kinase 1 (MINK1/MAP4K6) and TRAF2 and NCK interacting kinase (TNIK/MAP4K7), as potent LATS1/2-activating kinases.

Overexpression or deletion of MAP4Ks affects the phosphorylation and activity of Large tumor suppressor 1/2 (LATS1/2, homologues of Wts) and Yes-associated protein (YAP) /transcriptional co-activator with PDZ-binding motif (TAZ). By acting in a LATS-dependent, but Mammalian Ste20-like kinases 1/2 (MST1/2, homologues of Hpo)-independent manner, MAP4Ks restrict the activity of YAP/TAZ by promoting their phosphorylation and inhibiting target gene expression. MAP4Ks are components of the Hippo pathway by directly phosphorylating and activating the LATS1/2 kinases. MAP4K2/4/6 and MST1/2 both belong to the STE20-like kinase family, and their kinase domains are highly homologous to one another. MAP4K4 acts through LATS to inhibit YAP and cell proliferation.
### MAP4K Inhibitors

**DMX-5804**  
Cat. No.: HY-111754

DMX-5804 is a potent, orally active and selective MAP4K4 inhibitor, with an IC₅₀ of 3 nM, a pIC₉₀ of 8.55 for human MAP4K4, less potent on MNK1/MAP4K6 (pIC₉₀ 8.38), and TNIK/MAP4K7 (pIC₉₀ 7.96).

**Purity:** 99.90%  
**Clinical Data:** No Development Reported  
**Size:** 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

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**GNE 220**  
Cat. No.: HY-U00428

GNE-220 is a potent and selective inhibitor of MAP4K4 with an IC₅₀ of 7 nM.

**Purity:** >98%  
**Clinical Data:** No Development Reported  
**Size:** 5 mg, 10 mg, 25 mg

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**GNE 220 Hydrochloride**  
Cat. No.: HY-U00428A

GNE 220 (Hydrochloride) is a potent and selective inhibitor of MAP4K4, with an IC₅₀ of 7 nM.

**Purity:** 98.32%  
**Clinical Data:** No Development Reported  
**Size:** 10 mM × 1 mL, 5 mg, 10 mg, 25 mg

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**GNE-495**  
Cat. No.: HY-100343

GNE-495 is a potent and selective MAP4K4 inhibitor with an IC₅₀ of 3.7 nM.

**Purity:** 99.68%  
**Clinical Data:** No Development Reported  
**Size:** 1 mg, 5 mg, 10 mg, 50 mg, 100 mg

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**NCB-0846**  
Cat. No.: HY-100830

NCB-0846 is an orally available TNIK inhibitor with an IC₅₀ of 21nM.

**Purity:** 99.55%  
**Clinical Data:** No Development Reported  
**Size:** 10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

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**PF-06260933**  
Cat. No.: HY-19562

PF-06260933 is an orally active and highly selective inhibitor of MAP4K4 with IC₅₀ of 3.7 and 160 nM for kinase and cell, respectively.

**Purity:** 99.69%  
**Clinical Data:** No Development Reported  
**Size:** 10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

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**NG25**  
Cat. No.: HY-15434

NG25 is a potent dual TAK1 and MAP4K2 inhibitor, with IC₅₀ of 149 nM and 21.7 nM, respectively.

**Purity:** 99.45%  
**Clinical Data:** No Development Reported  
**Size:** 10 mM × 1 mL, 1 mg, 5 mg, 10 mg

---

**TAK1/MAP4K2 inhibitor 1**  
Cat. No.: HY-77251

TAK1/MAP4K2 inhibitor 1 is a potent dual TGFβ-activated kinase 1 (TAK1) and mitogen-activated protein kinase kinase kinase 2 (MAP4K2) inhibitor, with IC₅₀ of 41.1 nM and 18.2 nM, respectively.

**Purity:** 99.70%  
**Clinical Data:** No Development Reported  
**Size:** 10 mM × 1 mL, 5 mg, 10 mg, 50 mg
**MAPKAPK2 (MK2)**

Mitogen-activated protein kinase activated protein kinase 2; MAP kinase activated protein kinase 2; MAPK activated protein kinase 2; MAPKAP kinase 2

MAP kinase-activated protein kinase 2 (MAPKAPK2) is an enzyme that in humans is encoded by the MAPKAPK2 gene. MAPKAP kinase-2 (MK2) is originally identified by its phosphorylation of glycogen synthase at serine-7 and the corresponding serine in a peptide (GS peptide-1) modelled after the N-terminus of glycogen synthase.

MAPKAP kinase-2 is a novel protein kinase activated by mitogen-activated protein kinase. This MAP kinase activated protein kinase, termed MAPKAP kinase-2, is distinguished from S6 kinase-II (MAPKAP kinase-1) by its response to inhibitors, lack of phosphorylation of S6 peptides and amino acid sequence.
MAPKAPK2 (MK2) Inhibitors

**CMPD1**
Cat. No.: HY-108643

CMPD1 is a selective and non-ATP-competitive p38 MAPK-mediated MK2 phosphorylation inhibitor with apparent $K_i$ ($K_{ic} = 330$ nM).

- **Purity:** >99.0%
- **Clinical Data:** No Development Reported
- **Size:** 10 mM × 1 mL, 5 mg

**MK-2 Inhibitor III**
Cat. No.: HY-112457

MK-2 Inhibitor III (compound 16) is an orally active, selective, and ATP-competitive MAPKAP-K2 (MK-2) inhibitor with an $IC_{50}$ of 0.85 nM, and is exceptional selectivity against MK-3 ($IC_{50} = 0.21$ μM), MK-5 ($IC_{50} = 0.081$ μM), ERK2 ($IC_{50} = 3.44$ μM), MNK1 ($IC_{50} = 5.7$ μM) as well...

- **Purity:** >99.0%
- **Clinical Data:** No Development Reported
- **Size:** 1 mg, 5 mg

**MK2-IN-1**
Cat. No.: HY-12834

MK2-IN-1 is a potent and selective MAPKAP2(MK2) inhibitor ($IC_{50} = 0.11$ μM) with a non-ATP competitive binding mode.

- **Purity:** >98%
- **Clinical Data:** No Development Reported
- **Size:** 5 mg, 10 mg, 50 mg

**PF-3644022**
Cat. No.: HY-107427

PF-3644022 is a potent, selective, orally active and ATP-competitive MAPKAP2 (MK2) inhibitor with an $IC_{50}$ of 5.2 nM and a $K_i$ of 3 nM. PF-3644022 also inhibits MK3 and p38 regulated/activated kinase (PRAK) with $IC_{50}$s of 53 nM and 5.0 nM, respectively.

- **Purity:** >98%
- **Clinical Data:** No Development Reported
- **Size:** 10 mM × 1 mL, 1 mg, 5 mg, 10 mg

**MK2-IN-1 hydrochloride**
Cat. No.: HY-12834A

MK2-IN-1 hydrochloride is a potent and selective MAPKAP2(MK2) inhibitor ($IC_{50} = 0.11$ μM) with a non-ATP competitive binding mode.

- **Purity:** 99.19%
- **Clinical Data:** No Development Reported
- **Size:** 10 mM × 1 mL, 5 mg, 10 mg, 50 mg
MEK
Mitogen-activated protein kinase kinase; MAPKK; MAP2K

MEK (Mitogen-activated protein kinase kinase, MAPKK) is a kinase enzyme which phosphorylates mitogen-activated protein kinase (MAPK). The activators of p38 (M KK3 and MKK6), JNK (M KK4 and MKK7), and ERK (MEK1 and MEK2) define independent MAP kinase signal transduction pathways. The acronym MEK derives from Mitogen/Extracellular signal-regulated Kinase. MEK is a member of the MAPK signaling cascade that is activated in melanoma. When MEK is inhibited, cell proliferation is blocked and apoptosis (controlled cell death) is induced.
MEK Inhibitors & Antagonists

**APS-2-79**
Cat. No.: HY-100627
APS-2-79 behaves as a kinase suppressor of Ras (KSR)-dependent antagonist of RAF-mediated MEK phosphorylation. APS-2-79 binds directly to KSR2 within the KSR2-MEK1 complex with an IC\(_{50}\) of 120±23 nM for KSR2.

**Purity:** 99.31%
**Clinical Data:** No Development Reported
**Size:** 10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

**AZD8330**
(ARRY-424704; ARRY-704)
Cat. No.: HY-12058
AZD8330 (ARRY-424704) is a potent, uncompetitive MEK1/MEK2 inhibitor, with an IC\(_{50}\) of 7 nM.

**Purity:** 98.75%
**Clinical Data:** Phase 1
**Size:** 10 mM × 1 mL, 10 mg, 50 mg, 100 mg

**BI-847325**
Cat. No.: HY-18955
BI-847325 is an ATP competitive dual inhibitor of MEK and aurora kinases (AK) with IC\(_{50}\) values of 4 and 15 nM for human MEK2 and AK-C, respectively.

**Purity:** 99.14%
**Clinical Data:** No Development Reported
**Size:** 10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

**BIX02188**
Cat. No.: HY-12055
BIX02188 is a potent MEK5-selective inhibitor with an IC\(_{50}\) of 4.3 nM. BIX02188 inhibits ERK5 catalytic activity, with an IC\(_{50}\) of 810 nM.

**Purity:** 99.49%
**Clinical Data:** No Development Reported
**Size:** 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

**CHMFL-EGFR-202**
Cat. No.: HY-101522
CHMFL-EGFR-202 is a potent, irreversible inhibitor of epidermal growth factor receptor (EGFR) mutant kinase, with IC\(_{50}\)s of 5.3 nM and 8.3 nM for drug-resistant mutant EGFR T790M and WT EGFR kinases, respectively.

**Purity:** >98%
**Clinical Data:** No Development Reported
**Size:** 100 mg, 250 mg, 500 mg

**CI-1040**
(PD 184352)
Cat. No.: HY-50295
CI-1040 (PD184352) is an orally active, highly specific, small-molecule inhibitor of MEK with an IC\(_{50}\) of 17 nM for MEK1.

**Purity:** 98.54%
**Clinical Data:** Phase 2
**Size:** 10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg, 200 mg

**Balamapimod**
(MKI 833)
Cat. No.: HY-14947
Balamapimod (MKI 833) is a reversible Ras/Raf/MEK inhibitor with potential anti-tumor activity.

**Purity:** >98%
**Clinical Data:** No Development Reported
**Size:** 100 mg, 250 mg, 500 mg

**Binimetinib**
(MEK162; ARRY-162; ARRY-438162)
Cat. No.: HY-15202
Binimetinib (MEK162) is an oral and selective MEK1/2 inhibitor. Binimetinib (MEK162) inhibits MEK with an IC\(_{50}\) of 12 nM.

**Purity:** 99.55%
**Clinical Data:** Phase 3
**Size:** 10 mM × 1 mL, 10 mg, 50 mg, 100 mg, 200 mg

**HY-101522**
**HY-100627A**
**HY-12056**
**HY-12057**
**HY-14947**
**HY-15202**
**HY-18955**

www.MedChemExpress.com
**Cobimetinib (GDC-0973; XL518)**  
Cat. No.: HY-13064

Cobimetinib (GDC-0973, RG7420) is a potent, selective and oral MEK1 inhibitor with an IC\textsubscript{50} of 4.2 nM for MEK1.

- **Purity:** 99.70%
- **Clinical Data:** Launched
- **Size:** 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

**Cobimetinib R-enantiomer (GDC-0973 R-enantiomer; XL518 R-enantiomer)**  
Cat. No.: HY-13079

Cobimetinib R-enantiomer is the less active R-enantiomer of Cobimetinib. Cobimetinib is a potent and selective MEK inhibitor.

- **Purity:** >98%
- **Clinical Data:** No Development Reported
- **Size:** 10 mM × 1 mL, 5 mg

**Cobimetinib hemifumarate (GDC-0973 hemifumarate; XL-518 hemifumarate)**  
Cat. No.: HY-13064A

Cobimetinib hemifumarate is a novel selective MEK1 inhibitor, and the IC\textsubscript{50} value against MEK1 is 4.2 nM.

- **Purity:** 99.27%
- **Clinical Data:** Launched
- **Size:** 10 mM × 1 mL, 5 mg, 10 mg, 50 mg

**EBI-1051**  
Cat. No.: HY-111368

EBI-1051 is a highly potent and orally efficacious MEK inhibitor with an IC\textsubscript{50} of 3.9 nM.

- **Purity:** >98%
- **Clinical Data:** No Development Reported
- **Size:** 100 mg, 250 mg, 500 mg

**GDC-0623 (RG 7421; MEK inhibitor 1)**  
Cat. No.: HY-15610

GDC-0623 (RG 7421) is a potent, ATP-competitive inhibitor of MEK1 (IC\textsubscript{50}=0.13 nM, +ATP), and displays 6-fold weaker potency against HCT116 (KRAS (G13D), EC\textsubscript{50}=42 nM) versus A375 (BRAF\textsuperscript{V600E}, IC\textsubscript{50}=7 nM).

- **Purity:** 99.15%
- **Clinical Data:** Phase 1
- **Size:** 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

**GW284543 (UNC10225170)**  
Cat. No.: HY-114189

GW284543 (UNC10225170) is a selective MEK5 inhibitor. GW284543 (UNC10225170) reduces pERK5 and decreases endogenous MYC protein.

- **Purity:** 99.86%
- **Clinical Data:** No Development Reported
- **Size:** 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

**Isorhamnetin (3'-Methylquercetin)**  
Cat. No.: HY-N0776

Isorhamnetin is a flavonoid compound extracted from the Chinese herb Hippophae rhamnoides L.. Isorhamnetin suppresses skin cancer through direct inhibition of MEK1 and PI3K.

- **Purity:** 99.95%
- **Clinical Data:** No Development Reported
- **Size:** 10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg

**Lidocaine (Lignocaine)**  
Cat. No.: HY-80185

Lidocaine (Lignocaine) inhibits sodium channels involving complex voltage and using dependence.

- **Purity:** 99.52%
- **Clinical Data:** Launched
- **Size:** 10 mM × 1 mL, 500 mg, 5 g, 10 g

**Lidocaine hydrochloride (Lignocaine hydrochloride)**  
Cat. No.: HY-80185A

Lidocaine hydrochloride (Lignocaine hydrochloride) inhibits sodium channels involving complex voltage and using dependence.

- **Purity:** 99.95%
- **Clinical Data:** Launched
- **Size:** 10 mM × 1 mL, 500 mg, 5 g, 10 g
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<tr>
<th><strong>MEK inhibitor</strong></th>
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<tbody>
<tr>
<td>MEK inhibitor is a potent MEK inhibitor with antitumor potency.</td>
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<tr>
<td><strong>Purity:</strong> 98.68%</td>
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<td><strong>Clinical Data:</strong> No Development Reported</td>
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<td><strong>Size:</strong> 10 mM × 1 mL, 5 mg, 10 mg</td>
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<tr>
<th><strong>MEK-IN-1</strong></th>
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<tr>
<td>MEK-IN-1 is a MEK inhibitor extracted from patent WO2008076415A1.</td>
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<tr>
<td><strong>Purity:</strong> &gt;98%</td>
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<td><strong>Clinical Data:</strong> No Development Reported</td>
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<td><strong>Size:</strong> 1 mg, 5 mg, 10 mg, 20 mg</td>
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<tr>
<th><strong>MS432</strong></th>
<th><strong>Cat. No.:</strong> HY-130602</th>
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</thead>
<tbody>
<tr>
<td>MS432 is a first-in-class and highly selective PD0325901-based VHL-recruiting PROTAC degrader for MEK1 and MEK2. MS432 displays good plasma exposure in mice, exhibiting DC_{50} values of 31 nM and 17 nM for MEK1, MEK2 in HT29 cells respectively.</td>
<td></td>
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<tr>
<td><strong>Purity:</strong> &gt;98%</td>
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<tr>
<td><strong>Clinical Data:</strong> No Development Reported</td>
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<td><strong>Size:</strong> 100 mg, 250 mg, 500 mg</td>
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<tr>
<th><strong>PD318088</strong></th>
<th><strong>Cat. No.:</strong> HY-12062</th>
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<tbody>
<tr>
<td>PD318088 is an allostERIC MEK inhibitor.</td>
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<tr>
<td><strong>Purity:</strong> 99.53%</td>
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<td><strong>Clinical Data:</strong> No Development Reported</td>
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<tr>
<th><strong>PD98059</strong></th>
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<tbody>
<tr>
<td>PD98059 is a selective, cell permeable inhibitor of the MEK. PD98059 binds to the inactive form of MEK, thereby preventing the activation of MEK1 (IC_{50}=2-7 μM) and MEK2 (IC_{50}=50 μM) by upstream kinases. PD98059 causes G1 arrest by blocking p53-dependent p21 induction.</td>
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<tr>
<td><strong>Purity:</strong> 99.84%</td>
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<td><strong>Clinical Data:</strong> No Development Reported</td>
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<table>
<thead>
<tr>
<th><strong>Pimasertib (AS703026; MSC19363698)</strong></th>
<th><strong>Cat. No.:</strong> HY-12042</th>
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</thead>
<tbody>
<tr>
<td>Pimasertib (AS703026) is a highly selective, potent, ATP non-competitive allostERIC inhibitor of MEK1/2, used for cancer treatment.</td>
<td></td>
</tr>
<tr>
<td><strong>Purity:</strong> 99.95%</td>
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<tr>
<td><strong>Clinical Data:</strong> Phase 2</td>
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<td><strong>Size:</strong> 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg</td>
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<tr>
<th><strong>Reformetinib (BAY 869766; RDEA119)</strong></th>
<th><strong>Cat. No.:</strong> HY-14691</th>
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<tbody>
<tr>
<td>Reformetinib (BAY 869766; RDEA119) is an orally available, potent, non-ATP-competitive, selective, allostERIC MEK1/MEK2 inhibitor with IC_{50} of 19 nM and 47 nM, respectively.</td>
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<td><strong>Purity:</strong> 99.82%</td>
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<td><strong>Clinical Data:</strong> Phase 2</td>
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<td><strong>Size:</strong> 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg</td>
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<tr>
<th><strong>Refometinib R enantiomer (BAY 869766 R enantiomer; RDEA119 R enantiomer)</strong></th>
<th><strong>Cat. No.:</strong> HY-10216</th>
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<tr>
<td>Reformetinib R enantiomer is a MEK inhibitor extracted from patent WO2007014011A2, compound 1022, has an EC_{50} of 2.9-15 nM.</td>
<td></td>
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<tr>
<td><strong>Purity:</strong> &gt;98%</td>
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<td><strong>Clinical Data:</strong> No Development Reported</td>
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<td><strong>Size:</strong> 1 mg</td>
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<th><strong>RGB-286638</strong></th>
<th><strong>Cat. No.:</strong> HY-15504</th>
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<tbody>
<tr>
<td>RGB-286638 is a CDK inhibitor that inhibits the kinase activity of cyclin T1-CDK9, cyclin B1-CDK1, cyclin E-CDK2, cyclin D1-CDK4, cyclin E-CDK3, and p35-CDK5 with IC_{50} of 1, 2, 3, 4, 5 and 5 nM, respectively, also inhibits GSK-3β, TAK1, Jak2 and MEK1, with IC_{50} of 3, 5, 50, and 54 nM.</td>
<td></td>
</tr>
<tr>
<td><strong>Purity:</strong> 98.72%</td>
<td></td>
</tr>
<tr>
<td><strong>Clinical Data:</strong> Phase 1</td>
<td></td>
</tr>
<tr>
<td><strong>Size:</strong> 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg</td>
<td></td>
</tr>
<tr>
<td><strong>RGB-286638 free base</strong></td>
<td><strong>Cat. No.: HY-15504A</strong></td>
</tr>
<tr>
<td>--------------------------</td>
<td>------------------------</td>
</tr>
<tr>
<td>RGB-286638 is a CDK inhibitor that inhibits the kinase activity of cyclin T1-CDK9, cyclin B1-CDK1, cyclin E-CDK2, cyclin D1-CDK4, cyclin E-CDK3, and p35-CDK5 with IC_{50} of 1, 2, 3, 4, 5 and 5 nM, respectively; also inhibits GSK-3β, TAK1, Jak2 and MEK1, with IC_{50} of 3, 5, 50, and 54 nM.</td>
<td></td>
</tr>
<tr>
<td><strong>Purity:</strong></td>
<td>98.07%</td>
</tr>
<tr>
<td><strong>Clinical Data:</strong></td>
<td>Phase 1</td>
</tr>
<tr>
<td><strong>Size:</strong></td>
<td>10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Ro 5126766</strong></th>
<th><strong>Cat. No.: HY-18652</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Ro 5126766 is a first-in-class dual MEK/RAF inhibitor that allosterically inhibits BRAF&lt;sup&gt;V600E&lt;/sup&gt;, CRAF, MEK, and BRAF (IC&lt;sub&gt;50&lt;/sub&gt; 8.2, 56, 160 nM, and 190 nM, respectively).</td>
<td></td>
</tr>
<tr>
<td><strong>Purity:</strong></td>
<td>97.92%</td>
</tr>
<tr>
<td><strong>Clinical Data:</strong></td>
<td>Phase 1</td>
</tr>
<tr>
<td><strong>Size:</strong></td>
<td>10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>RO4987655</strong></th>
<th><strong>Cat. No.: HY-14719</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>RO4987655 is an orally active and highly selective MEK inhibitor with an IC&lt;sub&gt;50&lt;/sub&gt; of 5.2 nM for inhibition of MEK1/MEK2.</td>
<td></td>
</tr>
<tr>
<td><strong>Purity:</strong></td>
<td>99.17%</td>
</tr>
<tr>
<td><strong>Clinical Data:</strong></td>
<td>Phase 1</td>
</tr>
<tr>
<td><strong>Size:</strong></td>
<td>10 mM × 1 mL, 2 mg, 5 mg, 10 mg, 50 mg</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Selumetinib</strong></th>
<th><strong>Cat. No.: HY-50706</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Selumetinib (AZD6244) is selective, non-ATP-competitive oral MEK1/2 inhibitor, with an IC&lt;sub&gt;50&lt;/sub&gt; of 14 nM for MEK1. Selumetinib (AZD6244) inhibits ERK1/2 phosphorylation.</td>
<td></td>
</tr>
<tr>
<td><strong>Purity:</strong></td>
<td>99.87%</td>
</tr>
<tr>
<td><strong>Clinical Data:</strong></td>
<td>Launched</td>
</tr>
<tr>
<td><strong>Size:</strong></td>
<td>10 mM × 1 mL, 50 mg, 100 mg, 200 mg, 500 mg, 1 g</td>
</tr>
</tbody>
</table>

| **Selumetinib sulfate** | **(AZD6244 sulfate; ARRY-142886 sulfate)** | **Cat. No.: HY-50706A** |
|--------------------------|---------------------------------------------|
| Selumetinib (AZD6244) is selective, non-ATP-competitive oral MEK1/2 inhibitor, with an IC<sub>50</sub> of 14 nM for MEK1. Selumetinib (AZD6244) inhibits ERK1/2 phosphorylation. | |
| **Purity:** | 99.48% |
| **Clinical Data:** | No Development Reported |
| **Size:** | 10 mM × 1 mL, 50 mg, 100 mg, 200 mg, 500 mg, 1 g |

<table>
<thead>
<tr>
<th><strong>TAK-733</strong></th>
<th><strong>Cat. No.: HY-13449</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>TAK-733 is a potent and selective MEK allosteric site inhibitor with an IC&lt;sub&gt;50&lt;/sub&gt; of 3.2 nM.</td>
<td></td>
</tr>
<tr>
<td><strong>Purity:</strong></td>
<td>99.81%</td>
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<tr>
<td><strong>Clinical Data:</strong></td>
<td>Phase 1</td>
</tr>
<tr>
<td><strong>Size:</strong></td>
<td>10 mM × 1 mL, 5 mg, 10 mg, 50 mg</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Theaflavin 3,3’-digallate</strong></th>
<th><strong>(TF3)</strong></th>
<th><strong>Cat. No.: HY-N1992</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Theaflavin 3,3’-digallate (TF3), the typical pigment in black tea, is a good antitumor agent.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Purity:</strong></td>
<td>98.70%</td>
<td></td>
</tr>
<tr>
<td><strong>Clinical Data:</strong></td>
<td>No Development Reported</td>
<td></td>
</tr>
<tr>
<td><strong>Size:</strong></td>
<td>10 mM × 1 mL, 5 mg, 10 mg</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Trametinib</strong></th>
<th><strong>(GSK1120212; JTP-74057)</strong></th>
<th><strong>Cat. No.: HY-10999</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Trametinib (GSK1120212; JTP-74057) is a potent MEK inhibitor that inhibits MEK1 and MEK2 with IC&lt;sub&gt;50&lt;/sub&gt; of about 2 nM.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Purity:</strong></td>
<td>99.44%</td>
<td></td>
</tr>
<tr>
<td><strong>Clinical Data:</strong></td>
<td>Launched</td>
<td></td>
</tr>
<tr>
<td><strong>Size:</strong></td>
<td>10 mM × 1 mL, 10 mg, 50 mg, 100 mg</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Trametinib (DMSO solvate)</strong></th>
<th><strong>(GSK-1120212 (DMSO solvate); JTP-74057 (DMSO solvate))</strong></th>
<th><strong>Cat. No.: HY-10999A</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Trametinib DMSO solvate (GSK-1120212 (DMSO solvate); JTP-74057 (DMSO solvate)) is a potent MEK inhibitor that specifically inhibits MEK1/2, with an IC&lt;sub&gt;50&lt;/sub&gt; value of about 2 nM.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Purity:</strong></td>
<td>99.77%</td>
<td></td>
</tr>
<tr>
<td><strong>Clinical Data:</strong></td>
<td>Launched</td>
<td></td>
</tr>
<tr>
<td><strong>Size:</strong></td>
<td>10 mM × 1 mL, 10 mg, 50 mg, 100 mg</td>
<td></td>
</tr>
</tbody>
</table>
**trans-Zeatin**

trans-Zeatin is a plant cytokinin, which plays an important role in cell growth, differentiation, and division; trans-Zeatin also inhibits UV-induced MEK/ERK activation.

- **Purity:** 99.28%
- **Clinical Data:** No Development Reported
- **Size:** 10 mM × 1 mL, 10 mg, 50 mg

**Xanthocillin**

Xanthocillin is a marine agent extracted from Penicillium commune, induces autophagy through inhibition of the MEK/ERK pathway.

- **Purity:** >98%
- **Clinical Data:** No Development Reported
- **Size:** 100 mg, 250 mg, 500 mg

**U0126**

(U0126-EtOH)

U0126 is a potent and non-ATP competitive MEK1 and MEK2 inhibitor, with IC₅₀ of 70 nM and 60 nM, respectively.

- **Purity:** 98.06%
- **Clinical Data:** No Development Reported
- **Size:** 10 mM × 1 mL, 10 mg, 50 mg, 100 mg, 200 mg, 500 mg
Mixed Lineage Kinase
MLKs

Mixed lineage kinases (MLKs) are mitogen activated protein kinase kinase kinases (MAPKKKs) with features of both serine-threonine and tyrosine kinases that regulate the c-Jun N-terminal kinase (JNK) mitogen activated protein kinase (MAPK) signaling cascade, and also regulate p38 and extracellular signal-regulated kinase (ERK).

MLK3 (MAP3K11) is the most widely expressed MLK family member, and is expressed in neurons (as well as other cell types). At the cellular level, MLK3 is activated by stress, including reactive oxygen species, ceramide, and TNFα. At the molecular level, it is activated by Cdc42 and Rac, which interact with MLK3, and can cause it to dimerize via a leucine zipper interface, resulting in autophosphorylation and enzyme activation.
Mixed Lineage Kinase Inhibitors

(E)-Necrosulfonamide

(E)-Necrosulfonamide is a necroptosis inhibitor acting by selectively targeting the mixed lineage kinase domain-like protein (MLKL) to block the necrosome formation.

Purity: 99.23%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

TC13172

TC13172 is a mixed lineage kinase domain-like protein (MLKL) inhibitor with an EC_{50} value of 2 nM for HT-29 cells.

Purity: 99.04%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

GW806742X

GW806742X is a Mixed Lineage Kinase Domain-Like protein (MLKL) inhibitor which binds the MLKL pseudokinase domain with a K_{d} value of 9.3 μM and has anti-necroptosis activity. GW806742X has activity against VEGFR2.

Purity: 98.09%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

URMC-099

URMC-099 is an orally bioavailable and potent mixed lineage kinase type 3 (MLK3) (IC_{50}=14 nM) inhibitor with excellent blood-brain barrier penetration properties.

Purity: 99.90%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg
MNK

Mitogen activated protein kinase interacting kinase; MAP kinase interacting kinase; MAPK interacting kinase

Mitogen-activated protein kinase-interacting kinases 1 and 2 (MNK1 and MNK2) phosphorylate the oncogene eIF4E on serine 209. This phosphorylation has been reported to be required for its oncogenic activity. Eukaryotic initiation factor 4E (eIF4E) is a key component of the translational machinery and an important modulator of cell growth and proliferation. The activity of eIF4E is thought to be regulated by interaction with inhibitory binding proteins (4E-BPs) and phosphorylation by mitogen-activated protein (MAP) kinase-interacting kinase (MNK) on Ser209 in response to mitogens and cellular stress.
## MNK Inhibitors

<table>
<thead>
<tr>
<th>Compound</th>
<th>Cat. No.</th>
<th>Description</th>
<th>Purity</th>
<th>Clinical Data</th>
<th>Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cercosporamide</td>
<td>HY-16982</td>
<td>Purity: &gt;98.0%&lt;br&gt;Clinical Data: No Development Reported&lt;br&gt;Size: 500 µg, 1 mg</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CGP 57380</td>
<td>HY-10520</td>
<td>CGP 57380 is a cell-permeable pyrazolo-pyrimidine compound that acts as a selective inhibitor of MNK1 with IC&lt;sub&gt;50&lt;/sub&gt; of 2.2 µM, but has no inhibitory activity against p38, JNK1, ERK1/2, PKC, or Src-like kinases.&lt;br&gt;Purity: 98.03%&lt;br&gt;Clinical Data: No Development Reported&lt;br&gt;Size: 10 mM × 1 mL, 10 mg, 50 mg</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ETC-206</td>
<td>HY-112424</td>
<td>ETC-206 is a selective MNK1 and MNK2 inhibitor with IC&lt;sub&gt;50&lt;/sub&gt;s of 64 nM and 86 nM, respectively.&lt;br&gt;Purity: 99.76%&lt;br&gt;Clinical Data: No Development Reported&lt;br&gt;Size: 10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SLV-2436</td>
<td>HY-112113</td>
<td>SLV-2436 is a highly potent and ATP-competitive inhibitor of MNK1 and MNK2 with IC&lt;sub&gt;50&lt;/sub&gt;s of 10.8 nM and 5.4 nM, respectively.&lt;br&gt;Purity: 98.13%&lt;br&gt;Clinical Data: No Development Reported&lt;br&gt;Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tomivosertib</td>
<td>HY-100022</td>
<td>Tomivosertib (eFT508) is a potent, highly selective, and orally bioavailable MNK1 and MNK2 inhibitor, with IC&lt;sub&gt;50&lt;/sub&gt;s of 1-2 nM against both isoforms.&lt;br&gt;Purity: 99.49%&lt;br&gt;Clinical Data: Phase 2&lt;br&gt;Size: 10 mM × 1 mL, 1 mg, 5 mg, 10 mg, 50 mg, 100 mg</td>
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</tbody>
</table>

www.MedChemExpress.com
p38 MAPK

The p38 MAPK family consists of highly conserved proline-directed serine-threonine protein kinases that are activated in response to a number many growth factors, cytokines, and chemotactic substances, such as vascular endothelial growth factor (VEGF), fibroblast growth factor (FGF), PDGF, TNF, interleukins, lipopolysaccharide (LPS) and formyl-methionyl-leucyl-phenylalanine (fMLP). It is well known that p38 is involved in inflammation, apoptosis, cardiomyocyte hypertrophy and cell differentiation.

The p38 MAPK family is composed of four proteins: p38α (encoded by the gene Mapk14), p38β (Mapk11), p38γ (Mapk12), and p38δ (Mapk13). Their coding genes have a distinct tissue distribution and they appear differentially expressed, being Mapk14 the most highly expressed. p38 MAPKs are substrates for three MAP2K (M KK6, M KK3, and M KK4). The contribution of each of these MAP2K to p38 MAPKs activation depends on the stimulus and the cell type. The MAP3Ks that lead to p38 MAPKs activation are ASK1, DLK1, TAK1, TAO1, TAO2, TPL2, MLK3, MEKK3, MEKK4, and ZAK1.
p38 MAPK Inhibitors & Activators

(Rac)-Hesperetin
Cat. No.: HY-N0168A

(Rac)-Hesperetin is the racemate of Hesperetin. Hesperetin is a natural flavanone, and acts as a potent and broad-spectrum inhibitor against human UGT activity. Hesperetin induces apoptosis via p38 MAPK activation.

Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

5,6,7-Trimethoxyflavone
(Baicalein trimethyl ether)
Cat. No.: HY-110398

5,6,7-Trimethoxyflavone is a novel p38-α MAPK inhibitor with an anti-inflammatory effect. 5,6,7-Trimethoxyflavone is isolated from several plants including Zeyheria tuberculosa, Callicarpa japonica, and Kickxia lanigera.

Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

AL 8697
Cat. No.: HY-108645

AL 8697, a specific and orally active p38α MAPK inhibitor with an IC₅₀ of 6 nM, 14-fold less potent in p38β MAPK (IC₅₀=82 nM), exhibits anti-inflammatory activity.

Purity: >99.0%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg

AMG-548 dihydrochloride
Cat. No.: HY-108642B

AMG-548 dihydrochloride, an orally active and selective p38α inhibitor (Kᵢ=0.5 nM), shows slightly selective over p38β (Kᵢ=36 nM) and >1000 fold selective against p38γ and p38δ. AMG 548 is also extremely potent in the inhibition of whole blood LPS stimulated TNFα (IC₅₀=3 nM).

Purity: >98%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 1 mg, 5 mg, 10 mg

AZD7624
Cat. No.: HY-103672

AZD7624 is an inhaled p38 inhibitor, with potent anti-inflammatory activity.

Purity: >98%
Clinical Data: No Development Reported
Size: 5 mg, 10 mg, 50 mg, 100 mg

4-Hydroxylonchocarpin
Cat. No.: HY-N2208

4-Hydroxylonchocarpin is a chalcone compound from an extract of Psoralea corylifolia. 4-Hydroxylonchocarpin increases phosphorylation of p38 MAPK, JNK and ERK.

Purity: >98%
Clinical Data: No Development Reported
Size: 5 mg, 10 mg

Acumapimod
Cat. No.: HY-16715

Acumapimod (BCT197) is an orally active p38 MAP kinase inhibitor, with an IC₅₀ of less than 1 μM for p38α.

Purity: 99.03%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg, 200 mg

AMG-548 hydrochloride
Cat. No.: HY-108642A

AMG-548 hydrochloride, an orally active and selective p38α inhibitor (Kᵢ=0.5 nM), shows slightly selective over p38β (Kᵢ=36 nM) and >1000 fold selective against p38γ and p38δ.

Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

Bakuchiol
((S)-(+)-Bakuchiol)
Cat. No.: HY-N0235

Bakuchiol is a phytoestrogen isolated from the seeds of Psoralea corylifolia L, has anti-tumor effects.

Purity: 99.25%
Clinical Data: Phase 2
Size: 10 mM × 1 mL, 5 mg, 10 mg
<table>
<thead>
<tr>
<th>Compound</th>
<th>Cat. No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bisabolangelone</td>
<td>HY-N4233</td>
<td>Bisabolangelone, a sesquiterpene derivative, is isolated from the roots of Osteria Radix.</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Purity:</strong> &gt;98%                                      <strong>Clinical Data:</strong> No Development Reported                                      <strong>Size:</strong> 1 mg, 5 mg</td>
</tr>
<tr>
<td></td>
<td>HY-N2270</td>
<td>Chicanine is a lignan compound of Schisandra chinensis, inhibits LPS-induced phosphorylation of p38 MAPK, ERK 1/2 and JκB-α, with anti-inflammatory activity.</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Purity:</strong> &gt;98%                                      <strong>Clinical Data:</strong> No Development Reported                                      <strong>Size:</strong> 1 mg, 5 mg</td>
</tr>
<tr>
<td></td>
<td>HY-N7255</td>
<td>Cycloartenol, a phytosterol compound, is one of the key precursor substances for biosynthesis of numerous sterol compounds. Cycloartenol inhibits the migration of glioma cells and suppresses the phosphorylation of the p38 MAP kinase.</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Purity:</strong> &gt;98%                                      <strong>Clinical Data:</strong> No Development Reported                                      <strong>Size:</strong> 1 mg, 5 mg</td>
</tr>
<tr>
<td></td>
<td>HY-N2406</td>
<td>Dihydrocaffeic acid is a phenolic acid found in Gynura bicolor, reduces phosphorylation of MAPK p38 and prevent UVB-induced skin damage. Antioxidant potential and anti-inflammatory activity.</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Purity:</strong> &gt;98%                                      <strong>Clinical Data:</strong> No Development Reported                                      <strong>Size:</strong> 100 mg</td>
</tr>
<tr>
<td></td>
<td>HY-10320</td>
<td>Doramapimod (BIRB 796) is an orally active, highly potent p38 MAPK inhibitor, which has an IC_{50} for p38α=38 nM, for p38β=65 nM, for p38γ=200 nM, and for p38δ=520 nM. Doramapimod (BIRB 796) has picomolar affinity for p38 kinase (K_{i}=0.1 nM).</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Purity:</strong> 99.72%                                     <strong>Clinical Data:</strong> Phase 2                                                   <strong>Size:</strong> 10 mM × 1 mL, 10 mg, 50 mg, 100 mg, 200 mg</td>
</tr>
<tr>
<td></td>
<td>HY-14305A</td>
<td>BMS-582949 hydrochloride is an orally active and highly selective p38α MAPK inhibitor, with an IC_{50} of 13 nM. BMS-582949 hydrochloride displays a significantly improved pharmacokinetic profile and is effective in inflammatory disease.</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Purity:</strong> 98.82%                                     <strong>Clinical Data:</strong> Phase 2                                                   <strong>Size:</strong> 10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg</td>
</tr>
<tr>
<td></td>
<td>HY-N0631</td>
<td>Cornuside is a secoiridoid glucoside isolated from the fruit of Cornus officinalis Sieb. et Zucc., which is a traditional oriental medicine for treating inflammatory diseases and invigorating blood circulation.</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Purity:</strong> &gt;98%                                      <strong>Clinical Data:</strong> No Development Reported                                      <strong>Size:</strong> 5 mg, 10 mg</td>
</tr>
<tr>
<td></td>
<td>HY-N0674A</td>
<td>Dehydrocorydaline chloride is an alkaloidal that has anti-inflammatory and anti-cancer activities. Dehydrocorydaline chloride can elevate p38 MAPK activation.</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Purity:</strong> 98.64%                                     <strong>Clinical Data:</strong> No Development Reported                                      <strong>Size:</strong> 10 mM × 1 mL, 5 mg, 10 mg</td>
</tr>
<tr>
<td></td>
<td>HY-10404</td>
<td>Dilmapimod (SB-681323, GW 681323) is a potent p38 MAPK inhibitor that potentially suppresses inflammation in chronic obstructive pulmonary disease.</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Purity:</strong> 99.56%                                     <strong>Clinical Data:</strong> Phase 2                                                   <strong>Size:</strong> 10 mM × 1 mL, 1 mg, 5 mg, 10 mg, 20 mg</td>
</tr>
<tr>
<td></td>
<td>HY-N0188</td>
<td>Esculin, a fluorescent coumarin glucoside, is an active ingredient of ash bark. Esculin ameliorates cognitive impairment in experimental diabetic nephropathy (DN), and exerts antioxidative stress and anti-inflammatory effects, via the MAPK signaling pathway.</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Purity:</strong> 99.97%                                     <strong>Clinical Data:</strong> No Development Reported                                      <strong>Size:</strong> 10 mM × 1 mL, 100 mg</td>
</tr>
<tr>
<td>Cat. No.</td>
<td>Name and Description</td>
<td>Purity</td>
</tr>
<tr>
<td>----------</td>
<td>----------------------</td>
<td>--------</td>
</tr>
<tr>
<td>HY-W018643</td>
<td>Ferulic acid methyl ester (Methyl ferulate)</td>
<td>99.18%</td>
</tr>
<tr>
<td>HY-18754</td>
<td>FR 167653 free base</td>
<td>&gt;98%</td>
</tr>
<tr>
<td>HY-N0168</td>
<td>Hesperetin</td>
<td>98.75%</td>
</tr>
<tr>
<td>HY-N4182</td>
<td>Licochalcone E</td>
<td>&gt;98%</td>
</tr>
<tr>
<td>HY-18850</td>
<td>MAPK13-IN-1</td>
<td>98.47%</td>
</tr>
<tr>
<td>HY-W18634</td>
<td>TRXN2</td>
<td>99.18%</td>
</tr>
<tr>
<td>HY-19900</td>
<td>ITX5061</td>
<td>98.07%</td>
</tr>
<tr>
<td>HY-N2138</td>
<td>Muramyl dipeptide (MDP)</td>
<td>&gt;98%</td>
</tr>
</tbody>
</table>

Purity: %
Clinical Data: (No Development Reported)
Size: (example) 10 mM × 1 mL, 50 mg
MW-150 (MW01-18-150SRM)
Cat. No.: HY-120111
MW150 (MW01-18-150SRM) is a selective, CNS penetrant, and orally active inhibitor of p38α MAPK with a Kᵢ of 101 nM. MW-150 inhibits the ability of the endogenous p38α MAPK to phosphorylate an endogenous substrate MK2 in activated glia.
Purity: 98.23%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

MW-150 hydrochloride (MW01-18-150SRM hydrochloride)
Cat. No.: HY-120111A
MW-150 hydrochloride (MW01-18-150SRM hydrochloride) is a selective, CNS penetrant, and orally active inhibitor of p38α MAPK with a Kᵢ of 101 nM.
Purity: >98%
Clinical Data: No Development Reported
Size: 250 mg, 500 mg

p38 MAPK-IN-1
Cat. No.: HY-12839
p38 MAPK-IN-1 (Compound 4) is a novel potent and selective inhibitor of p38 MAPK with IC₅₀ of 68 nM. p38 MAPK-IN-1 shows sustained levels, low clearance and good bioavailability.
Purity: >98%
Clinical Data: No Development Reported
Size: 5 mg, 10 mg, 50 mg, 100 mg

p38α MAPK-IN-1
Cat. No.: HY-18874
p38α MAPK-IN-1 is an inhibitor of MAPK14 (p38-α), with IC₅₀ of 2300 nM in EFC displacement assay, and 5500 nM in HTRF assay.
Purity: 99.92%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 1 mg, 5 mg, 10 mg, 50 mg, 100 mg

Pamapimod (Ro4402257; R1503)
Cat. No.: HY-10405
Pamapimod is a novel p38 mitogen-activated protein kinase inhibitor. Pamapimod inhibited p38α and p38β enzymatic activity, with IC50 values of 0.014 ± 0.002 and 0.48 ± 0.04 μM, respectively. Pamapimod is p38 inhibitor with IC50 of 0.06μM in THP-1 cell.
Purity: 99.92%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 1 mg, 5 mg, 10 mg, 25 mg

MW-150 dihydrochloride dihydrate (MW01-18-150SRM dihydrochloride dihydrate)
Cat. No.: HY-120111B
MW-150 dihydrochloride dihydrate (MW01-18-150SRM dihydrochloride dihydrate) is a selective, CNS penetrant, and orally active inhibitor of p38α MAPK with a Kᵢ of 101 nM.
Purity: >98%
Clinical Data: No Development Reported
Size: 5 mg, 10 mg, 50 mg, 100 mg

Neflamapimod (VX-745)
Cat. No.: HY-10328
Neflamapimod (VX-745) is a potent, blood-brain barrier penetrant, highly selective inhibitor of p38α with an IC₅₀ for p38α of 10 nM and for p38β of 220 nM. Neflamapimod (VX-745) possesses anti-inflammatory activity.
Purity: 98.74%
Clinical Data: Phase 2
Size: 10 mM × 1 mL, 10 mg, 50 mg

p38 MAPK-IN-2
Cat. No.: HY-U00324
p38 MAPK-IN-2 is an inhibitor of p38 kinase.
Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg, 10 mg, 20 mg

p38α inhibitor 1
Cat. No.: HY-114423
p38α inhibitor 1 is a p38α inhibitor extracted from patent WO 2008076265 A1.
Purity: 98.70%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

Paris saponin VII (Chonglou Saponin VII)
Cat. No.: HY-N3584
Paris saponin VII (Chonglou Saponin VII) is a steroidal saponin isolated from the roots and rhizomes of Trillium tschonoskii Maxim. Paris saponin VII-induced apoptosis in K562/ADR cells is associated with Akt/MAPK and the inhibition of P-gp.
Purity: >98%
Clinical Data: No Development Reported
Size: 5 mg, 10 mg
PD 169316
Cat. No.: HY-10578
PD 169316 is a potent, cell-permeable and selective p38 MAP kinase inhibitor, with IC₅₀ of 89 nM. PD169316 selectively inhibits the kinase activity of the phosphorylated p38 without hindering upstream kinases to phosphorylate p38.

Purity: 98.33%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 10 mg, 50 mg

PF-3644022
Cat. No.: HY-107427
PF-3644022 is a potent, selective, orally active and ATP-competitive MAPKAPK2 (MK2) inhibitor with an IC₅₀ of 5.2 nM and a Kᵢ of 3 nM. PF-3644022 also inhibits MK3 and p38 regulated/activated kinase (PRAK) with IC₅₀ of 53 nM and 5.0 nM, respectively.

Purity: >98%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 1 mg, 5 mg, 10 mg

R1487 Hydrochloride
Cat. No.: HY-14975
R1487 (Hydrochloride) is highly potent and highly selective inhibitors of p38α, target: p38α; R1487 (Hydrochloride) potently inhibits cytokine production in a variety of in vitro and in vivo models.

Purity: 98.94%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

Ralimetinib dimesylate
(LY2228820 dimesylate)
Cat. No.: HY-13241
Ralimetinib dimesylate (LY2228820 dimesylate) is a selective, ATP-competitive inhibitor of p38 MAPK α/β with IC₅₀ of 5.3 and 3.2 nM, respectively.

Purity: 99.98%
Clinical Data: Phase 2
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

Rhoifolin
Cat. No.: HY-N0755
Rhoifolin is a flavone glycoside isolated from Citrus grandis (L) Osbeck leaves. Rhoifolin is beneficial for diabetic complications through enhanced adiponectin secretion, tyrosine phosphorylation of insulin receptor-β and glucose transporter 4 (GLUT 4) translocation.

Purity: >98%
Clinical Data: No Development Reported
Size: 5 mg, 10 mg, 20 mg

Rotundic acid
Cat. No.: HY-N2217
Rotundic acid, a triterpenoid obtained from 1. rotunda, induces DNA damage and cell apoptosis in hepatocellular carcinoma through AKT/mTOR and MAPK Pathways. Rotundic acid possesses anti-inflammatory and cardio-protective abilities.

Purity: >98%
Clinical Data: No Development Reported
Size: 5 mg, 10 mg

Pexmetinib
(ARRY-614)
Cat. No.: HY-16782
Pexmetinib is a potent Tie-2 and p38 MAPK dual inhibitor, with IC₅₀ of 1 nM, 35 nM and 26 nM for Tie-2, p38α and p38β, respectively, and can be used in the research of acute myeloid leukemia.

Purity: 99.90%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

PH-797804
Cat. No.: HY-10403
PH-797804 is an ATP-competitive, selective p38α/p38β inhibitor (IC₅₀=26 nM and Kᵢ=5.8 nM for p38α; Kᵢ=40 nM for p38β) and does not inhibit JNK2.

Purity: 98.59%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg, 200 mg

RWJ-67657
 Cat. No.: HY-15505
RWJ-67657 (JNJ 3026582) is an orally active and highly potent and selective p38 MAP kinase inhibitor (IC₅₀=5.3 nM and 3.2 nM for p38α and p38β, respectively). RWJ-67657 displays no activity at p38γ and p38δ, and exhibits cardio protective effect. Anti-inflammatory and anti-tumor activity.

Purity: >98%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg
SB 202190

Cat. No.: HY-10295

SB 202190 is a cell-permeable p38 MAP kinase inhibitor with IC_{50} of 50 nM and 100 nM for p38α and p38β2, respectively. SB 202190 binds to the ATP pocket of the active recombinant human p38 kinase with a K_{D} of 38 nM.

Purity: 99.89%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 50 mg, 100 mg, 200 mg

SB 203580 hydrochloride

Cat. No.: HY-10256A

SB 203580 hydrochloride (RWJ 64809 hydrochloride) is a widely used p38 MAPK inhibitor. SB 203580 hydrochloride (RWJ 64809 hydrochloride) inhibits SAPK2a/p38 and SAPK2b/p38β2, with IC_{50} of 50 nM and 500 nM, respectively.

Purity: 99.71%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 50 mg, 100 mg, 200 mg

SB 239063

Cat. No.: HY-11068

SB 239063 is a potent, selective and orally active p38 MAPK inhibitor, exhibits an IC_{50} of 44 nM for recombinant purified human p38α, with equipotent inhibitory activity against p38α and p38β. SB 239063 has no effect on p38γ or p38β.

Purity: 99.53%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg

SB 242235

Cat. No.: HY-18306

SB-242235 is a potent and selective p38 MAP kinase inhibitor, with an IC_{50} of 1.0µM in primary human chondrocytes.

Purity: 98.63%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

SJFα

Cat. No.: HY-114404

SJFα is a 13-atom linker PROTAC. SJFα degrades p38α with a DC_{50} of 7.16nM, but is far less effective at degrading p38β (DC_{50}=299nM) and does not degrade the other p38 isoforms (β and γ) at concentrations up to 2.5µM.

Purity: >98%
Clinical Data: No Development Reported
Size: 100 mg, 250 mg, 500 mg

Skatole

Cat. No.: HY-W007355

(3-Methylindole; 3-Methyl-1H-indole)

Skatole is produced by intestinal bacteria, regulates intestinal epithelial cellular functions through activating aryl hydrocarbon receptors and p38.

Purity: >98.0%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 100 mg

Skepinone-L

Cat. No.: HY-15300

Skepinone-L (CBS3830) is a selective p38 mitogen-activated protein kinase inhibitor.

Purity: 99.63%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg
SKF-86002
Cat. No.: HY-12511
SKF-86002 is a potent inhibitor of p38 MAP kinase with IC50 of 0.5-1 μM; inhibits LPS-induced IL-1 and TNF-α production in human monocytes (IC50 = 1 μM).

Purity: 99.51%
Clinical Data: No Development Reported
Size: 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

TA-01
Cat. No.: HY-100114
TA-01 is a potent CK1 and p38 MAPK inhibitor, with IC50 of 6.4 nM, 6.8 nM, 6.7 nM for CK1ε, CK1δ and p38 MAPK, respectively.

Purity: 99.93%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg

TA-02
Cat. No.: HY-100115
TA-02 is a p38 MAPK inhibitor with IC50 of 20 nM. IC50 value. 20 nM Target: p38 TA-02 is a novel compound with similar cardiogenic properties as SB203580 and SB202190. TA-02 especially inhibits TGFBR-2.

Purity: 99.30%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 1 mg, 5 mg, 10 mg, 50 mg, 100 mg

Talmipimod
Cat. No.: HY-10406
Talmipimod (SCIO-469) is an orally active, selective, and ATP-competitive p38α inhibitor with IC50 of 9 nM, shows about 10-fold selectivity over p38β, and at least 2000-fold selectivity over a panel of 20 other kinases, including other MAPKs.

Purity: 98.73%
Clinical Data: Phase 2
Size: 10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg

UM-164
Cat. No.: HY-112182
UM-164 (DAS-DFGO-II) is a highly potent inhibitor of c-Src with a Kd of 2.7 nM. UM-164 also potently inhibits p38α and p38β.

Purity: 99.08%
Clinical Data: No Development Reported
Size: 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

VX-702
Cat. No.: HY-10401
VX-702 is a highly selective inhibitor of p38α MAPK, 14-fold higher potency against the p38α versus p38β.

Purity: 99.75%
Clinical Data: Phase 2
Size: 10 mM × 1 mL, 10 mg, 50 mg, 100 mg, 200 mg
Raf

Raf kinases

Raf kinases are a family of three serine/threonine-specific protein kinases that are related to retroviral oncogenes. RAF is an acronym for Rapidly Accelerated Fibrosarcoma. Raf kinases participate in the RAS-RAF-MEK-ERK signal transduction cascade, also referred to as the mitogen-activated protein kinase (MAPK) cascade. Activation of RAF kinases requires interaction with RAS-GTPases. The three RAF kinase family members are: A-Raf, B-Raf, C-Raf (Raf-1). The B-Raf protein is involved in sending signals inside cells, which are involved in directing cell growth. It was shown to be faulty (mutated) in some human cancers. C-RAF or even Raf-1 is an enzyme that in humans is encoded by the RAF1 gene. The c-Raf protein is part of the ERK1/2 pathway as a MAP kinase kinase kinase (MAP3K) that functions downstream of the Ras subfamily of membrane associated GTPases. C-Raf is a member of the Raf kinase family of serine/threonine-specific protein kinases, from the TKL (Tyrosine-kinase-like) group of kinases.
### Raf Inhibitors

#### (Z)-GW 5074

Cat. No.: HY-10542A

(Z)-GW 5074 is a compound which interacts with both mHTT (mutant huntingtin protein) and LC3, but not but not with the wild-type HTT protein. (Z)-GW 5074 inhibits c-Raf, shows no effect on autophagy, and is effective for neurodegenerative disorder.

| Purity: | >98% |
| Clinical Data: | No Development Reported |
| Size: | 10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg |

#### Agerafenib

Cat. No.: HY-15200

Agerafenib (CEP-32496; RXDX-105) is a highly potent and orally efficacious inhibitor of BRAF<sup>V600E</sup> with a \( K_i \) of 14 nM.

| Purity: | 99.20% |
| Clinical Data: | Phase 1 |
| Size: | 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg |

#### AZ 628

Cat. No.: HY-11004

AZ 628 is a pan-Raf kinase inhibitor with \( IC_{50} \)s of 105, 34 and 29 nM for B-Raf, B-Raf<sup>V600E</sup>, and c-Raf-1, respectively.

| Purity: | 99.56% |
| Clinical Data: | No Development Reported |
| Size: | 10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg |

#### AD80

Cat. No.: HY-101963

AD80, a multikinase inhibitor, inhibits RET, B-Raf, SRC, and 56K, with greatly reduced mTOR activity.

| Purity: | 99.46% |
| Clinical Data: | No Development Reported |
| Size: | 10 mM × 1 mL, 1 mg, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg |

#### Agerafenib hydrochloride

Cat. No.: HY-15199

Agerafenib hydrochloride is a highly potent and orally efficacious inhibitor of BRAF<sup>V600E</sup> with a \( K_i \) of 14 nM.

| Purity: | >98% |
| Clinical Data: | Phase 1 |
| Size: | 5 mg, 10 mg, 50 mg, 100 mg |

#### AZ304

Cat. No.: HY-117273

AZ304 is an ATP-competitive dual BRAF kinase inhibitor, potently inhibits wild type BRAF, V600E mutant BRAF and wild type CRAF, with \( IC_{50} \)s of 79 nM, 38 nM and 68 nM, respectively. AZ304 also has significant effect on other kinases, such as p38 (\( IC_{50} \) 6 nM), CSF1R (\( IC_{50} \) 35 nM).

| Purity: | 99.39% |
| Clinical Data: | No Development Reported |
| Size: | 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg |

#### B-Raf IN 1

Cat. No.: HY-18227

B-Raf IN 1 is a potent and selective B-Raf kinase inhibitor with an \( IC_{50} \) of 24 nM.

| Purity: | 98.08% |
| Clinical Data: | No Development Reported |
| Size: | 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg |

#### B-Raf inhibitor 1

Cat. No.: HY-14177

B-Raf inhibitor 1 is a potent Raf kinase inhibitor with \( K_i \)s of 1 nM, 1 nM, and 0.3 nM for B-Raf<sup>WT</sup>, B-Raf<sup>V600E</sup>, and C-Raf, respectively.

| Purity: | 98.05% |
| Clinical Data: | No Development Reported |
| Size: | 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg |

#### B-Raf inhibitor 1 dihydrochloride

Cat. No.: HY-14177A

B-Raf inhibitor 1 dihydrochloride is a potent Raf kinase inhibitor with \( IC_{50} \)s of 56 nM, 7 nM and 5 nM for B-Raf, B-Raf<sup>V600E</sup> and C-Raf, respectively.

| Purity: | >98% |
| Clinical Data: | No Development Reported |
| Size: | 5 mg, 10 mg, 50 mg, 100 mg |

#### Belvarafenib

Cat. No.: HY-19080

Belvarafenib (HM95573; DGC-5573; RG6185) is a potent and pan RAF (Rapidly Accelerated Fibrosarcoma) inhibitor, with \( IC_{50} \)s of 56 nM, 7 nM and 5 nM for B-Raf, B-Raf<sup>V600E</sup> and C-Raf, respectively.

| Purity: | >98% |
| Clinical Data: | No Development Reported |
| Size: | 250 mg, 500 mg |
Belvarafenib TFA (HM95573 TFA; GDC-5573 TFA; RG6185 TFA)  
Cat. No.: HY-109080A

Belvarafenib TFA (HM95573 TFA) is a potent and pan-RAF (Rapidly Accelerated Fibrosarcoma) inhibitor, with IC_{50} values of 56 nM, 7 nM and 3 nM for B-Raf, B-Raf\textsuperscript{V600E} and C-RAF respectively.

Purity: > 99.0%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

BI-882370  
Cat. No.: HY-107779

BI-882370 is a potent and selective RAF kinase inhibitor that binds to the ATP binding site of the kinase positioned in the DFG-out (inactive) conformation of the BRAF kinase.

Purity: > 98%
Clinical Data: No Development Reported
Size: 5 mg, 10 mg, 50 mg, 100 mg

BRAF inhibitor  
Cat. No.: HY-10247

BRAF inhibitor is a B-Raf inhibitor extracted from patent WO/2011103196 A1, Compound P-0850.

Purity: 98.91%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 10 mg, 50 mg

CCT196969  
Cat. No.: HY-12846

CCT196969 is a pan-Raf inhibitor, which inhibits B-Raf, B-Raf\textsuperscript{V600E} and CRAF with IC_{50} values of 0.1, 0.04 and 0.01 μM, respectively.

Purity: 99.04%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

Dabrafenib (GSK2118436A; GSK2118436)  
Cat. No.: HY-14660

Dabrafenib is an ATP-competitive inhibitor of Raf with IC_{50} values of 5 nM and 0.6 nM for C-Raf and B-Raf\textsuperscript{V600E}, respectively.

Purity: 99.91%
Clinical Data: Launched
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg, 200 mg

Dabrafenib Mesylate (GSK2118436 Mesylate; GSK 2118436B)  
Cat. No.: HY-14660A

Dabrafenib Mesylate is a potent and selective Raf kinase inhibitor with IC_{50} values of 0.6 and 5.0 nM for Raf\textsuperscript{V600E} and c-Raf, respectively.

Purity: 99.94%
Clinical Data: Launched
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg, 500 mg

Dorapamidom (BIRB 796)  
Cat. No.: HY-10320

Dorapamidom (BIRB 796) is an orally active, highly potent p38 MAPK inhibitor, which has an IC_{50} for p38α=38 nM, for p38β=65 nM, for p38γ=200 nM, and for p38δ=520 nM. Dorapamidom (BIRB 796) has picomolar affinity for p38 kinase (K_{d}=8.1 nM).

Purity: 99.72%
Clinical Data: Phase 2
Size: 10 mM × 1 mL, 10 mg, 50 mg, 100 mg, 200 mg

Encorafenib (LGX818)  
Cat. No.: HY-15605

Encorafenib (LGX818) is a highly potent BRAF inhibitor with selective anti-proliferative and apoptotic activity in cells expressing BRAF\textsuperscript{V600E} (IC_{50}=4 nM).

Purity: 99.63%
Clinical Data: Phase 3
Size: 10 mM × 1 mL, 1 mg, 5 mg, 10 mg, 25 mg, 50 mg

ERK-IN-1  
Cat. No.: HY-114491

ERK-IN-1 (compound B) is a RAF and ERK1/2 inhibitor in the treatment of a proliferative disease characterized by activating mutations in the MAPK pathway.

Purity: > 98%
Clinical Data: No Development Reported
Size: 100 mg, 250 mg, 500 mg

GDC-0879  
Cat. No.: HY-50864

GDC-0879 is a potent and selective B-Raf inhibitor with an IC_{50} of 0.13 nM.

Purity: 99.94%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 2 mg, 5 mg, 10 mg, 25 mg, 50 mg
GW 5074

GW 5074 is a potent and selective c-Raf inhibitor with IC_{50} of 9 nM, and has no effect on the activities of JNK1/2/3, MEK1, MKK6/7, CDK1/2, c-Sc, p38 MAP, VEGF R2 or c-Fms.

Purity: 99.49%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

L-779450

L-779450 is a potent and selective B-Raf kinase inhibitor with a K_{d} of 2.4 nM.

Purity: 98.75%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

Lut014

LUT014 is a B-Raf inhibitor with an IC_{50} of 11.7 nM, and developed to reduce dose-limiting acneiform lesions associated EGFR Inhibitors treatment. Extracted from patent WO 2019026065A2.

Purity: 97.19%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

Ly3009120

LY3009120 is a pan RAF inhibitor which inhibits BRAF\textsuperscript{V600E}, BRAF\textsuperscript{WT} and CRAF\textsuperscript{WT} with IC_{50} of 5.8, 9.1 and 15 nM, respectively.

Purity: 98.66%
Clinical Data: Phase 1
Size: 10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

PLX7904

PLX7904 is a potent and selective BRAF inhibitor, with IC_{50} of appr 5 nM against BRAF\textsuperscript{V600E} in mutant RAS expressing cells.

Purity: 98.80%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

HG6-64-1

HG6-64-1 is a potent and selective B-Raf inhibitor extracted from patent WO 2011090738 A2, example 9 (Xl-1); has a IC_{50} of 0.09 μM on B-raf V600E transformed Ba/F3 cells.

Purity: 99.05%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

Lifirafenib

Lifirafenib (BGB-283) is a novel and potent Raf Kinase and EGFR inhibitor with IC_{50} values of 23 and 29 nM for recombinant BRaf\textsuperscript{V600E} and EGFR, respectively.

Purity: 98.02%
Clinical Data: Phase 1
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

LXH254

LXH254 is a potent B/C RAF inhibitor extracted from patent WO2018051306A1, Compound A.

Purity: 99.94%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

PLX-4720

PLX-4720 is a potent and selective inhibitor of B-Raf\textsuperscript{V600E} with IC_{50} of 13 nM in a cell-free assay, equally potent to c-Raf-1(Y340D and Y341D mutations), and 10-fold selectivity for B-Raf\textsuperscript{V600E} than wild-type B-Raf.

Purity: 99.88%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg, 200 mg

PLX8394

PLX8394 is a potent and selective BRAf inhibitor, with an IC_{50} of appr 5 nM for BRAF\textsuperscript{V600E}.

Purity: 99.94%
Clinical Data: Phase 2
Size: 10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

Cat. No. HY-10542
Cat. No. HY-12291
Cat. No. HY-12787
Cat. No. HY-18957
Cat. No. HY-111940
Cat. No. HY-112089
Cat. No. HY-12558
Cat. No. HY-51424
Cat. No. HY-18997
Cat. No. HY-18972

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### PROTAC B-Raf degrader 1

**Cat. No.: HY-111758**

PROTAC B-Raf degrader 1 (compound 2) is a proteolysis targeting chimera (PROTAC) for the degradation of B-Raf. With anti-cancer activity.

**Purity:** 99.18%
**Clinical Data:** No Development Reported
**Size:** 10 mM × 1 mL, 5 mg, 10 mg

### RAF265

(CHIR-265)

**Cat. No.: HY-10248**

RAF265 is a potent RAF/VEGFR2 inhibitor.

**Purity:** 99.98%
**Clinical Data:** Phase 2
**Size:** 10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg

### Regorafenib

(BAY 73-4506)

**Cat. No.: HY-10331**

Regorafenib (BAY 73-4506) is a multi-targeted receptor tyrosine kinase inhibitor with IC_{50}s of 13/4.2/46, 22, 7, 1.5 and 2.5 nM for VEGFR1/2/3, PDGFRβ, Kit, RET and Raf-1, respectively.

**Purity:** 99.96%
**Clinical Data:** Launched
**Size:** 10 mM × 1 mL, 10 mg, 50 mg, 100 mg

### Regorafenib Hydrochloride

(BAY73-4506 hydrochloride)

**Cat. No.: HY-13308**

Regorafenib Hydrochloride is a multi-target inhibitor for VEGFR1/2/3, PDGFRβ, Kit, RET and Raf-1 with IC_{50}s of 13/4.2/46, 22, 7, 1.5 and 2.5 nM, respectively.

**Purity:** 99.58%
**Clinical Data:** Launched
**Size:** 10 mM × 1 mL, 10 mg, 50 mg, 100 mg

### Ro 5126766

(CHS126766)

**Cat. No.: HY-18652**

Ro 5126766 is a first-in-class dual MEK/RAF inhibitor that allosterically inhibits BRAF^{V600E}, CRAF, MEK, and BRAF (IC_{50}: 56, 160 nM, and 190 nM, respectively).

**Purity:** 97.92%
**Clinical Data:** Phase 1
**Size:** 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

### SB-590885

**Cat. No.: HY-10966**

SB-590885 is a potent B-Raf inhibitor with K_{i} of 0.16 nM, and has 11-fold greater selectivity for B-Raf over c-Raf, without inhibition to other human kinases.

**Purity:** 99.03%
**Clinical Data:** No Development Reported
**Size:** 10 mM × 1 mL, 10 mg, 50 mg, 100 mg

### RAF709

**Cat. No.: HY-100510**

RAF709 is a potent, selective, and efficacious RAF inhibitor with IC_{50}s of 0.4 nM and 0.5 nM for BRAF and CRAF, respectively. Antitumor efficacy.

**Purity:** 99.55%
**Clinical Data:** No Development Reported
**Size:** 10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

### RAF mutant-IN-1

**Cat. No.: HY-126298**

RAF mutant-IN-1 is a RAF kinase inhibitor, extracted from patent WO2019107987A1, with IC_{50} values of 21 nM, 30 nM and 392 nM for C-RAF, BRAF^{V600E} and B-RAF^{599K}, respectively.

**Purity:** >98%
**Clinical Data:** No Development Reported
**Size:** 100 mg, 250 mg, 500 mg
<table>
<thead>
<tr>
<th>Compound</th>
<th>Cat. No.</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td><strong>Sorafenib</strong></td>
<td>HY-10201</td>
<td>Sorafenib (Bay 43-9006) is a potent, orally active multikinase inhibitor with IC(_{50})s of 6 nM, 20 nM, and 22 nM for Raf-1, B-Raf, and VEGFR-3, respectively.</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Purity:</strong> 99.92% <strong>Clinical Data:</strong> Launched <strong>Size:</strong> 10 mM × 1 mL, 100 mg, 500 mg</td>
</tr>
<tr>
<td><strong>Sorafenib (D3)</strong></td>
<td>HY-10201S</td>
<td>Sorafenib D3 (Bay 43-9006 D3) is the deuterium labeled Sorafenib. Sorafenib is a multikinase inhibitor IC(_{50})s of 6 nM, 20 nM, and 22 nM for Raf-1, B-Raf, and VEGFR-3, respectively.</td>
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<tr>
<td></td>
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<td><strong>Purity:</strong> &gt;98% <strong>Clinical Data:</strong> No Development Reported <strong>Size:</strong> 1 mg, 5 mg</td>
</tr>
<tr>
<td><strong>Sorafenib (D4)</strong></td>
<td>HY-10201D</td>
<td>Sorafenib D4 (Bay 43-9006 D4) is the deuterium labeled Sorafenib. Sorafenib is a multikinase inhibitor IC(_{50})s of 6 nM, 20 nM, and 22 nM for Raf-1, B-Raf, and VEGFR-3, respectively.</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Purity:</strong> &gt;98% <strong>Clinical Data:</strong> No Development Reported <strong>Size:</strong> 1 mg, 5 mg</td>
</tr>
<tr>
<td><strong>Sorafenib Tosylate</strong></td>
<td>HY-10201A</td>
<td>Sorafenib Tosylate (Bay 43-9006 Tosylate) is a potent multikinase inhibitor, with IC(_{50})s of 6 nM, 20 nM, and 22 nM for Raf-1, B-Raf, and VEGFR-3, respectively.</td>
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<tr>
<td></td>
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<td><strong>Purity:</strong> 99.53% <strong>Clinical Data:</strong> Launched <strong>Size:</strong> 10 mM × 1 mL, 100 mg, 500 mg</td>
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<tr>
<td><strong>TAK-580 (MLN 2480; BIBO-024)</strong></td>
<td>HY-15246</td>
<td>TAK-580 (MLN 2480) is an orally active and selective inhibitor of pan-Raf kinase.</td>
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<td></td>
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<td><strong>Purity:</strong> 99.89% <strong>Clinical Data:</strong> Phase 1 <strong>Size:</strong> 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg</td>
</tr>
<tr>
<td><strong>TAK-632</strong></td>
<td>HY-15767</td>
<td>TAK-632 is a potent pan-RAF inhibitor with IC(_{50}) of 1.4, 2.4 and 8.3 nM for CRAF, BRAF(^{WT}), Braf(^{G46E}), respectively.</td>
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<tr>
<td></td>
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<td><strong>Purity:</strong> 99.13% <strong>Clinical Data:</strong> No Development Reported <strong>Size:</strong> 10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg</td>
</tr>
<tr>
<td><strong>Vemurafenib</strong></td>
<td>HY-12057</td>
<td>Vemurafenib (PLX4032; RG7224; RG8185426) is a first-in-class, selective, potent inhibitor of B-RAF kinase, with IC(_{50}) of 31 and 48 nM for RAF(^{WT}) and c-RAF-1, respectively.</td>
</tr>
<tr>
<td></td>
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<td><strong>Purity:</strong> 99.80% <strong>Clinical Data:</strong> Launched <strong>Size:</strong> 10 mM × 1 mL, 10 mg, 50 mg, 100 mg, 200 mg, 500 mg, 1 g</td>
</tr>
<tr>
<td><strong>ZM 336372</strong></td>
<td>HY-13343</td>
<td>ZM 336372 is a potent inhibitor of the protein kinase c-Raf. The IC(_{50}) value is 0.07 μM in the standard assay, which contains 0.1 mM ATP.</td>
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<tr>
<td></td>
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<td><strong>Purity:</strong> 96.79% <strong>Clinical Data:</strong> No Development Reported <strong>Size:</strong> 10 mM × 1 mL, 5 mg, 10 mg, 50 mg</td>
</tr>
</tbody>
</table>
Ribosomal S6 Kinase (RSK)

Ribosomal S6 Kinase (RSK) is a family of protein kinases involved in signal transduction. There are two subfamilies of rsk, p90rsk, also known as MAPK-activated protein kinase-1 (MAPKAP-K1), and p70rsk, also known as S6-H1 Kinase or simply S6 Kinase. There are three variants of p90rsk in humans, rsk 1-3. Rsks are serine/threonine kinases and are activated by the MAPK/ERK pathway. There are two known mammalian homologues of S6 Kinase: S6K1 and S6K2. Rsk is named for ribosomal protein s6, part of the translational machinery, but several other substrates have been identified, including other ribosomal proteins. Cytosolic substrates of p90rsk include protein phosphatase 1; glycogen synthase kinase 3 (GSK3); L1 CAM, a neural cell adhesion molecule, the Ras exchange factor; and Myt1, an inhibitor of cdc2. p90rsk also regulates transcription factors including cAMP response element-binding protein (CREB); estrogen receptor-α (ERα); IkBa/NF-κB; and c-Fos.
Ribosomal S6 Kinase (RSK) Inhibitors

**AD80**
Cat. No.: HY-101963
AD80, a multikinase inhibitor, inhibits RET, Raf, Src, and S6K, with greatly reduced mTOR activity.

Purity: 99.46%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 1 mg, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

**AT13148**
Cat. No.: HY-16071
AT13148 is an orally active and ATP-competitive, multi-AGC kinase inhibitor with IC₅₀ of 38 nM/402 nM/50 nM, 8 nM, 3 nM, and 6 nM/4 nM for Akt1/2/3, p70S6K, PKA, and ROCK1/2, respectively.

Purity: 99.54%
Clinical Data: Phase 1
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

**AT7867**
Cat. No.: HY-12059
AT7867 is a potent ATP-competitive inhibitor of Akt1/Akt2/Akt3 and p70S6K/PKA with IC₅₀ of 32 nM/47 nM and 85 nM/20 nM, respectively.

Purity: 98.68%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

**AT7867 dihydrochloride**
Cat. No.: HY-12059A
AT7867 dihydrochloride is a potent ATP-competitive inhibitor of Akt1/Akt2/Akt3 and p70S6K/PKA with IC₅₀ of 32 nM/17 nM/47 nM and 85 nM/20 nM, respectively.

Purity: 99.77%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

**BI-D1870**
Cat. No.: HY-10510
BI-D1870 is an ATP-competitive, cell permeable inhibitor of RSK isoforms, with IC₅₀ of 31 nM/24 nM/18 nM/15 nM for RSK1/RSK2/RSK3/RSK4, respectively. BI-D1870 is a small-molecule inducer of insulin expression in pancreatic α-cells.

Purity: 99.60%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 2 mg, 5 mg, 10 mg, 50 mg

**BIX 02565**
Cat. No.: HY-16104
BIX 02565 is a potent ribosomal S6 kinase 2 (RSK2) inhibitor with IC₅₀ of 1.1 nM.

Purity: 99.33%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 2 mg, 5 mg, 10 mg, 50 mg, 100 mg

**BRD7389**
Cat. No.: HY-12185
BRD7389 is a specific RSK family kinase inhibitor with IC₅₀ of 1.5 μM, 2.4 μM, and 1.2 μM for RSK1, RSK2, and RSK3, respectively. BRD7389 is a small-molecule inducer of insulin expression in pancreatic α-cells.

Purity: >98%
Clinical Data: No Development Reported
Size: 10 mg

**Carnosol**
Cat. No.: HY-N0643
Carnosol is a potent Ribosomal S6 Kinase (RSK2) inhibitor that could be useful for treating gastric cancer, with an IC₅₀ of ~5.5 μM.

Purity: 99.90%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 2 mg, 5 mg, 10 mg, 25 mg

**CMK**
Cat. No.: HY-52101
CMK is a RSK2 kinase inhibitor which exhibits similar potency but less chemical stability compared with FMK.

Purity: 99.64%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 2 mg, 5 mg, 10 mg, 25 mg

www.MedChemExpress.com
FMK

Cat. No.: HY-52101A

FMK is an irreversible RSK2 kinase inhibitor, that covalently modifies the C-terminal kinase domain of RSK.

Purity: 99.30%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 2 mg, 5 mg, 10 mg, 25 mg

GSK-25

Cat. No.: HY-14362

GSK-25 is a potent, selective and orally bioavailable ROCK1 inhibitor (IC_{50}=7 nM). GSK-25 maintains good selectivity against a panel of 31 kinases (>100 fold), as well as RSK1 and p70S6K (RSK1: IC_{50}=398 nM, p70S6K: IC_{50}=1 μM).

Purity: 99.68%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg

LJI308

Cat. No.: HY-19713

LJI308 is a new and potent pan-RSK inhibitor, with IC_{50} of 6 nM, 4 nM, and 13 nM for RSK1, RSK2, and RSK3, respectively.

Purity: 99.82%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

LY-2584702 free base

Cat. No.: HY-12493

LY-2584702 free base is a selective ATP competitive inhibitor of p70S6K with an IC_{50} of 4 nM. In S6K1 enzyme assay, the IC_{50} of LY-2584702 is 2 nM.

Purity: >98%
Clinical Data: No Development Reported
Size: 5 mg, 10 mg, 50 mg, 100 mg

LY-2584702 hydrochloride

Cat. No.: HY-12493B

LY-2584702 hydrochloride is a selective ATP competitive inhibitor of p70S6K with an IC_{50} of 4 nM. In S6K1 enzyme assay, the IC_{50} of LY-2584702 is 2 nM.

Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

LY-2584702 tosylate salt

Cat. No.: HY-12493A

LY-2584702 tosylate salt is a selective ATP competitive inhibitor of p70S6K with an IC_{50} of 4 nM. In S6K1 enzyme assay, the IC_{50} of LY-2584702 is 2 nM.

Purity: 98.82%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

PF-4708671

Cat. No.: HY-15773

PF-4708671 is a potent cell-permeable S6K1 inhibitor with a K_{i} of 20 nM and IC_{50} of 160 nM.

Purity: 99.96%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 10 mg, 25 mg, 50 mg, 100 mg

FMK-MEA

Cat. No.: HY-52101C

FMK-MEA is a potent and selective p90 Ribosomal S6 Kinase (RSK) inhibitor.

Purity: >98%
Clinical Data: No Development Reported
Size: 5 mg, 10 mg, 25 mg

LJH685

Cat. No.: HY-19712

LJH685 is a potent, specific and selective RSK inhibitor, inhibits RSK1, 2, and 3 biochemical activities with IC_{50}s of 6, 5, 4 nM, respectively.

Purity: 99.99%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

Pluripotin

Cat. No.: HY-10579

Pluripotin is a dual inhibitor of ERK1 and RasGAP with K_{i}s of 98 nM and 212 nM, respectively. Pluripotin also inhibits RSK1, RSK2, RSK3, and RSK4 with IC_{50}s of 0.5, 2.5, 3.3, and 10.0 μM, respectively.

Purity: 98.86%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 2 mg, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg
<table>
<thead>
<tr>
<th>Quercitrin</th>
<th>Cat. No.: HY-N0418</th>
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<tbody>
<tr>
<td><strong>Quercitrin (Quercetin 3-rhamnoside)</strong></td>
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<td>Quercitrin is a natural compound found in Tartary buckwheat with a</td>
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<td>potential anti-inflammatory effect that is used to treat heart and</td>
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<tr>
<td>vascular conditions.</td>
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<tr>
<td><strong>Purity:</strong> 99.12%</td>
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<tr>
<td><strong>Clinical Data:</strong> No Development Reported</td>
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<tr>
<td><strong>Size:</strong> 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg</td>
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</table>

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<thead>
<tr>
<th>SL 0101-1 (SL0101)</th>
<th>Cat. No.: HY-15237</th>
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<tbody>
<tr>
<td>SL 0101 (SL0101), a kaempferol glycoside, isolated from the tropical</td>
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<tr>
<td>plant F. refracta, is a cell-permeable, selective, reversible, ATP-</td>
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<tr>
<td>competitive p90 Ribosomal S6 Kinase (RSK) inhibitor, with an IC₅₀</td>
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<td>of 89 nM.</td>
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<tr>
<td><strong>Purity:</strong> &gt;98.0%</td>
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</tr>
<tr>
<td><strong>Clinical Data:</strong> No Development Reported</td>
<td></td>
</tr>
<tr>
<td><strong>Size:</strong> 10 mM × 1 mL, 1 mg, 5 mg</td>
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