Apoptosis

Cell apoptosis, sometimes called programmed cell death, is a cellular self-destruction method to remove old and damaged cells during development and aging to protect cells from external disturbances and maintain homeostasis. Apoptosis also occurs as a defense mechanism such as in immune reactions or when cells are damaged by disease or noxious agents.

Apoptosis is controlled by many genes and involves two fundamental pathways: the extrinsic pathway, which transmits death signals by the death receptor (DR), and the intrinsic or mitochondrial pathway. The extrinsic apoptotic pathway is activated by the binding of the death ligand to DRs, including FasL, TNF-α, and TRAIL, on the plasma membrane. The DR, adaptor protein (FADD), and associated apoptosis signaling molecule (caspase-8) form the death-inducing signaling complex (DISC), thus leading to the activation of the effector caspase cascade (caspase-3, -6, and -7). The mitochondria-mediated intrinsic apoptosis pathway is regulated by Bcl-2 family proteins, including proapoptotic (Bid, Bax, Bak) and antiapoptotic proteins (Bcl-2, Bcl-xL).

Abnormalities in cell apoptosis can be a significant component of diseases such as cancer, autoimmune lymphoproliferative syndrome, AIDS, ischemia, and neurodegenerative diseases. These diseases may benefit from artificially inhibiting or activating apoptosis. A short list of potential methods of anti-apoptotic therapy includes stimulation of the IAP (inhibitors of apoptosis proteins) family of proteins, caspase inhibition, PARP (poly [ADP-ribose] polymerase) inhibition, stimulation of the PKB/Akt (protein kinase B) pathway, and inhibition of Bcl-2 proteins.

Ferroptosis and necroptosis are recently recognized forms of regulated cell death that differs considerably from apoptosis. Misregulated ferroptosis or necroptosis have also been implicated in multiple physiological and pathological processes, including cancer cell death, neurotoxicity, neurodegenerative diseases, etc.

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Apoptosis is a distinctive form of cell death exhibiting specific morphological and biochemical characteristics, including cell membrane blebbing, chromatin condensation, genomic DNA fragmentation, and exposure of specific phagocytosis signaling molecules on the cell surface. Cells undergoing apoptosis differ from those dying through necrosis. Necrotic cells are usually recognized by the immune system as a danger signal and, thus, resulting in inflammation; in contrast, apoptotic death is quiet and orderly.

There are two major pathways of apoptotic cell death induction: The intrinsic pathway, also called the Bcl-2-regulated or mitochondrial pathway, is activated by various developmental cues or cytotoxic insults, such as viral infection, DNA damage and growth-factor deprivation, and is strictly controlled by the BCL-2 family of proteins. The extrinsic or death-receptor pathway is triggered by ligation of death receptors (members of the tumor necrosis factor (TNF) receptor family, such as Fas or TNF receptor-1 (TNFR1)) that contain an intracellular death domain, which can recruit and activate caspase-8 through the adaptor protein Fas-associated death domain (FADD; also known as MORT1) at the cell surface. This recruitment causes subsequent activation of downstream (effector) caspases, such as caspase-3, -6 or -7, without any involvement of the BCL-2 family.

Studies suggest that alterations in cell survival contribute to the pathogenesis of a number of human diseases, including cancer, viral infections, autoimmune diseases, neurodegenerative disorders, and AIDS (acquired immunodeficiency syndrome). Treatments designed to specifically alter the apoptotic threshold may have the potential to change the natural progression of some of these diseases.
Apoptosis Inhibitors & Modulators

(E)-[6]-Dehydroparadol  
**Cat. No.: HY-77293**

**Bioactivity:** (E)-[6]-Dehydroparadol, extracted from patent US 9272994, compound M15, shows growth inhibition and induction of apoptosis against human cancer cells with IC$_{50}$ values of 43.02 μM in HCT-116 cell and 41.59 μM in H-1299 cell, respectively.

**Purity:** 98.87%

**Clinical Data:** No Development Reported

**Size:** 10mM x 1mL in DMSO, 5 mg, 10 mg, 50 mg, 100 mg, 500 mg

2-Methoxyestradiol  
(2-ME2; NSC-659853)  
**Cat. No.: HY-12033**

**Bioactivity:** 2-Methoxyestradiol is an angiogenesis inhibitor and apoptosis inducer with potent antineoplastic activity. 2-Methoxyestradiol also destabilize microtubules.

**Purity:** 99.82%

**Clinical Data:** Phase 2

**Size:** 10mM x 1mL in DMSO, 10 mg, 50 mg, 100 mg

4-Hydroxybenzyl alcohol  
**Cat. No.: HY-Y0892**

**Bioactivity:** 4-Hydroxybenzyl alcohol is a phenolic compound widely distributed in various kinds of plants. Anti-inflammatory, anti-oxidant, anti-nociceptive activity. Neuroprotective effect. Inhibitor of tumor angiogenesis and growth [1] [2]

**Purity:** 99.60%

**Clinical Data:** No Development Reported

**Size:** 10mM x 1mL in DMSO, 10 mg, 50 mg

Adarotene  
(ST1926)  
**Cat. No.: HY-14808**

**Bioactivity:** Adarotene is an effective apoptosis inducer, which surprisingly produces DNA damage and exhibits a potent antiproliferative activity on a large panel of human tumor cells.

**Purity:** 99.15%

**Clinical Data:** No Development Reported

**Size:** 10mM x 1mL in DMSO, 5 mg, 10 mg, 50 mg

Baohuoside I  
(Icarin-II; Icariside-II)  
**Cat. No.: HY-N0011**

**Bioactivity:** Baohuoside I, a flavonoid isolated from Epimedium koreanum Nakai, acts as an inhibitor of CXCR4, downregulates CXCR4 expression, induces apoptosis and shows anti-tumor activity.

**Purity:** 98.96%

**Clinical Data:** No Development Reported

**Size:** 10mM x 1mL in DMSO, 10 mg, 50 mg

Betulinic acid  
(Lupatic acid; Betulic acid)  
**Cat. No.: HY-10529**

**Bioactivity:** Betulinic acid is a natural pentacyclic triterpenoid, acts as a eukaryotic topoisomerase I inhibitor, with an IC$_{50}$ of 5 μM, and possesses anti-HIV, anti-malarial, anti-inflammatory and anti-tumor properties.

**Purity:** 98.18%

**Clinical Data:** Phase 2

**Size:** 10mM x 1mL in DMSO, 100 mg, 200 mg, 500 mg

Betulin  
(Trochol)  
**Cat. No.: HY-N0083**

**Bioactivity:** Betulin (Trochol), is a sterol regulatory element-binding protein (SREBP) inhibitor with an IC$_{50}$ of 14.5 μM in K562 cell line.

**Purity:** 98.0%

**Clinical Data:** No Development Reported

**Size:** 50 mg, 100 mg, 200 mg

Bisdemethoxycurcumin  
(Curcumin III; Didemethoxycurcumin)  
**Cat. No.: HY-N0007**

**Bioactivity:** Bisdemethoxycurcumin(Curcumin III, Didemethoxycurcumin) is a natural derivative of curcumin with anti-inflammatory and anti-cancer activities. IC50 value: Target: Anticancer natural compound in vitro: BDMD-induced apoptosis was mediated by a combinatory inhibition of cytoprotective proteins, such as...

**Purity:** 98.0%

**Clinical Data:** No Development Reported

**Size:** 10mM x 1mL in DMSO, 10 mg, 50 mg, 100 mg

BTR-1  
**Cat. No.: HY-111617**

**Bioactivity:** BTR-1 is an active anti-cancer agent, causes S phase arrest, and affects DNA replication in leukemic cells. BTR-1 activates apoptosis and induces cell death [1]

**Purity:** 99.96%

**Clinical Data:** No Development Reported

**Size:** 10mM x 1mL in DMSO, 5 mg, 10 mg, 50 mg, 100 mg

Calicheamicin  
(Calicheamicin y1)  
**Cat. No.: HY-19609**

**Bioactivity:** Calicheamicin is a cytotoxic agent that causes double-strand DNA breaks.

**Purity:** 98.44%

**Clinical Data:** No Development Reported

**Size:** 10mM x 1mL in DMSO, 1 mg, 5 mg, 10 mg
### Citric acid  
**Cat. No.:** HY-N1428  
**Bioactivity:** Citric acid is a weak organic tricarboxylic acid found in citrus fruits. Citric acid is a natural preservative and food tartness enhancer.  
**Purity:** 98.0%  
**Clinical Data:** No Development Reported  
**Size:** 10mM x 1mL in DMSO, 100 mg, 500 g

### Columbianadin  
**Cat. No.:** HY-N0362  
**Bioactivity:** Columbianadin, a natural coumarin from, is known to have various biological activities including anti-inflammatory and anti-cancer effects.  
**Purity:** 99.85%  
**Clinical Data:** No Development Reported  
**Size:** 10mM x 1mL in DMSO, 5 mg, 10 mg, 25 mg, 50 mg

### Costunolide  
**Cat. No.:** HY-N0036  
**Bioactivity:** Costunolide, a sesquiterpene lactone, exhibits anti-inflammatory and anti-oxidant properties and mediates apoptosis. IC50 Value: 6.2 - 9.8 μg/mL(sarcoma cells viability)[3] Target: Apoptosis inducer in vitro: Costunolide significantly inhibited RANKL-induced BMM differentiation into...  
**Purity:** 99.9%  
**Clinical Data:** No Development Reported  
**Size:** 10mM x 1mL in DMSO, 5 mg, 10 mg

### Desacetylcinobufotalin  
**Cat. No.:** HY-N0882  
**Bioactivity:** Desacetylcinobufotalin is a natural compound; apoptosis inducer and shows the marked inhibition effect to HepG2 cells and the IC50 value is 0.0277μmol/ml.  
**Purity:** >98%  
**Clinical Data:** No Development Reported  
**Size:** 10mM x 1mL in DMSO, 5 mg, 10 mg

### Ecteinascidin 770  
**Cat. No.:** HY-101191  
**Bioactivity:** Ecteinascidin 770 (ET-770) is a 1,2,3,4-tetrahydroisoquinoline alkaloid with potent anti-cancer activities; inhibits U373MG cells with an IC₅₀ of 4.83 nM.  
**Purity:** 98.82%  
**Clinical Data:** No Development Reported  
**Size:** 10mM x 1mL in DMSO, 1 mg

### Epibrassinolide  
**Cat. No.:** HY-N0848  
**Bioactivity:** Epibrassinolide is a natural brassinosteroid (BR) derivative, is a plant regulator with a similar structure to mammalian steroids. Epibrassinolide is a potential apoptotic inducer in various cancer cells without affecting the non-tumor cell growth.  
**Purity:** 98.0%  
**Clinical Data:** No Development Reported  
**Size:** 10mM x 1mL in DMSO, 5 mg, 10 mg, 50 mg, 100 mg

### Ginsenoside Rg6  
**Cat. No.:** HY-N0907  
**Bioactivity:** Ginsenoside Rg6 is the component isolated from notoginseng. Ginsenoside Rg6 inhibits TNF-α-induced NF-κB transcriptional activity with an IC₅₀ of 29.34±22.22 μM in HepG2 cells.  
**Purity:** >98%  
**Clinical Data:** No Development Reported  
**Size:** 5 mg, 10 mg

### Ginsenoside Rh2  
**Cat. No.:** HY-N0605  
**Purity:** 98.0%  
**Clinical Data:** No Development Reported  
**Size:** 10mM x 1mL in DMSO, 5 mg, 10 mg
Ginsenoside Rh4

**Cat. No.: HY-N0905**

**Bioactivity:** Ginsenoside Rh4 is a rare saponin obtained from Panax notoginseng. Ginsenoside Rh4 activates Bax, caspase 3, caspase 8, and caspase 9. Ginsenoside Rh4 also induces autophagy.

**Purity:** 98.40%

**Clinical Data:** No Development Reported

**Size:** 10mM x 1mL in DMSO, 5 mg, 10 mg

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Glycochenodeoxycholic acid

**(Chenodeoxycholylglycine)**

**Cat. No.: HY-N2334**

**Bioactivity:** Glycochenodeoxycholic acid is a bile salt formed in the liver from chenodeoxycholate and glycine; used to induce hepatocyte apoptosis in research.

**Purity:** 98.0%

**Clinical Data:** No Development Reported

**Size:** 10mM x 1mL in DMSO, 10 mg

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Iberin

**(NSC 321801)**

**Cat. No.: HY-101413**

**Bioactivity:** Iberin, a sulfone analogue of sulforaphane, is a naturally occurring member of the isothiocyanate family. It inhibits cell survival with an IC₅₀ of 2.3 μM in HL60 cell.

**Purity:** 98.00%

**Clinical Data:** No Development Reported

**Size:** 10mM x 1mL in DMSO, 2 mg

---

Isoalantolactone

**( (+)-Isoalantolactone; Isohelenin)**

**Cat. No.: HY-N0780**

**Bioactivity:** Isoalantolactone is an apoptosis inducer, which also acts as an alkylating agent.

**Purity:** 99.99%

**Clinical Data:** No Development Reported

**Size:** 10mM x 1mL in DMSO, 10 mg, 50 mg

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Kinetin riboside

**(N6-Furfuryladenosine)**

**Cat. No.: HY-101055**

**Bioactivity:** Kinetin riboside, a cytokinin analog, can induce apoptosis in cancer cells. It inhibits the proliferation of HCT-15 cells with an IC₅₀ of 2.5 μM.

**Purity:** 99.80%

**Clinical Data:** No Development Reported

**Size:** 10mM x 1mL in DMSO, 100 mg

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MDK83190

**Cat. No.: HY-18633**

**Bioactivity:** MDK83190 is a potent apoptosis activator; increases procaspase-9 processing and subsequent caspase-3 activation.

**Purity:** 97.06%

**Clinical Data:** No Development Reported

**Size:** 10mM x 1mL in DMSO, 10 mg, 50 mg, 100 mg

---

Meisoindigo

**(Dian III; N-Methylisoindigotin; Natura-α)**

**Cat. No.: HY-13680**

**Bioactivity:** Meisoindigo(Natura-α; N-Methylisoindigotin; Dian III), a derivative of Indigo naturalis, might induce apoptosis and myeloid differentiation of acute myeloid leukemia (AML).

**Purity:** 96.46%

**Clinical Data:** No Development Reported

**Size:** 10mM x 1mL in DMSO, 5 mg, 10 mg, 50 mg, 100 mg

---

Methyl protodioscin

**(NSC-698790; Smilax saponin B)**

**Cat. No.: HY-N0863**

**Bioactivity:** Methyl protodioscin(NSC-698790) is a furostanol bisglycoside with antitumor properties; shows to reduce proliferation, cause cell cycle arrest.

**Purity:** 98.0%

**Clinical Data:** No Development Reported

**Size:** 10mM x 1mL in DMSO, 5 mg, 10 mg

---

Myricetin

**(Cannabiscetin)**

**Cat. No.: HY-15097**

**Bioactivity:** Myricetin is a common plant-derived flavonoid with a wide range of activities including strong anti-oxidant, anticancer, antidiabetic and anti-inflammatory activities.

**Purity:** 99.41%

**Clinical Data:** No Development Reported

**Size:** 10mM x 1mL in DMSO, 50 mg, 100 mg, 200 mg, 500 mg

---

NSC348884

**Cat. No.: HY-13915**

**Bioactivity:** NSC348884 is a nucleophosmin inhibitor disrupts oligomer formation and induces apoptosis, inhibits cell proliferation at an IC₅₀ of 1.7-4.0 μM in distinct cancer cell lines. Target: nucleophosmin in vitro: NSC348884 is a putative nucleophosmin small molecular inhibitor that disrupts a...

**Purity:** 99.92%

**Clinical Data:** No Development Reported

**Size:** 10mM x 1mL in DMSO, 25 mg, 50 mg, 100 mg

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**Osajin**  
(CID 95168; NSC 21565)  
Cat. No.: HY-N3125

**Bioactivity:** Osajin is the major bioactive isoflavone present in the fruit of Maclura pomifera with antitumor, antioxidant and anti-inflammatory activities.

**Purity:** >98%

**Clinical Data:** No Development Reported

**Size:** 5 mg

---

**Polydatin**  
(Piceid)  
Cat. No.: HY-N0120A

**Bioactivity:** Polydatin (Piceid), extracted from the roots of Polygonum cuspidatum Sieb, a widely used traditional Chinese remedies, possesses anti-inflammatory activity in several experimental models.

**Purity:** 98.42%

**Clinical Data:** Phase 2

**Size:** 10mM x 1mL in DMSO, 100 mg, 200 mg, 500 mg

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**PTC-028**  
Cat. No.: HY-103696

**Bioactivity:** PTC-028 is an orally bioavailable inhibitor of stem cell factor BMI-1 in ovarian cancer. PTC-028 selectively inhibits cancer cells whereas normal cells remain unaffected. Depletion of BMI-1 by PTC-028 induces caspase-mediated apoptosis [1].

**Purity:** >98%

**Clinical Data:** No Development Reported

**Size:** 10mM x 1mL in DMSO, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

---

**RIPGBM**  
Cat. No.: HY-122910

**Bioactivity:** RIPGBM is a selective inducer of apoptosis in glioblastoma multiforme (GBM) cancer stem cells (CSCs) with an EC$_{50}$ of ≤500 nM [1].

**Purity:** >98%

**Clinical Data:** No Development Reported

**Size:** 250 mg, 500 mg

---

**Rottlerin**  
(Mallotoxin; NSC 56346; NSC 94525)  
Cat. No.: HY-18980

**Bioactivity:** Rottlerin, a natural product purified from Mallotus Philippensis, is a specific PKC inhibitor, with IC$_{50}$ values for PKCδ of 3-6 μM, PKCα,β,γ of 30-42 μM, PKCe,η,ζ of 80-100 μM. Rottlerin acts as a direct mitochondrial uncoupler, and stimulates autophagy by targeting a signaling cascade upstream...

**Purity:** 95.0%

**Clinical Data:** No Development Reported

**Size:** 10 mg, 25 mg

---

**RGD peptide (GRGDNP) TFA**  
Cat. No.: HY-P1740A

**Bioactivity:** RGD peptide (GRGDNP) (TFA) acts as an inhibitor of integrin-ligand interactions and plays an important role in cell adhesion, migration, growth, and differentiation [1]. RGD peptide (GRGDNP) (TFA) promote apoptosis through activation of conformation changes that enhance pro-caspase-3 activation and...

**Purity:** >98%

**Clinical Data:** No Development Reported

**Size:** 10mM x 1mL in DMSO, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

---

**S130**  
Cat. No.: HY-112818

**Bioactivity:** S130 is a high affinity, selective inhibitor of ATG4B (a major cysteine protease) with an IC$_{50}$ of 3.24 μM. S130 suppresses autophagy flux [1].

**Purity:** >98%

**Clinical Data:** No Development Reported

**Size:** 250 mg, 100 mg, 500 mg

---

**PBOX 6**  
Cat. No.: HY-U00446

**Bioactivity:** PBOX 6 is a pyrrolo-1,5-benzoxazepine (PBOX) compound, acts as a microtubule-depolymerizing agent and an apoptotic agent.

**Purity:** 98.0%

**Clinical Data:** No Development Reported

**Size:** 5 mg, 10 mg, 25 mg

---

**Protosappanin B**  
((-)-Protosappanin B)  
Cat. No.: HY-N0800

**Bioactivity:** Protosappanin B is a phenolic compound extracted from Lignum Sappan. Anti-cancer activity [1]. Protosappanin B induces apoptosis and causes G$_2$ cell cycle arrest in human bladder cancer cells [2].

**Purity:** >98%

**Clinical Data:** No Development Reported

**Size:** 10mM x 1mL in DMSO, 100 mg, 200 mg, 500 mg

---

**RGD peptide GRGDNP**  
Cat. No.: HY-P1740

**Bioactivity:** RGD peptide (GRGDNP) acts as an inhibitor of integrin-ligand interactions and plays an important role in cell adhesion, migration, growth, and differentiation [1]. RGD peptide (GRGDNP) promote apoptosis through activation of conformation changes that enhance pro-caspase-3 activation and...

**Purity:** >98%

**Clinical Data:** No Development Reported

**Size:** 10mM x 1mL in DMSO, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

---

**Bioactivity:** Osajin is the major bioactive isoflavone present in the fruit of Maclura pomifera with antitumor, antioxidant and anti-inflammatory activities.

Tel: 609-228-6898    Fax: 609-228-5909    Email: sales@MedChemExpress.com
**Sanguinarine**  
(Pseudochelerythrine; Sanguinarin)  
Cat. No.: HY-N0052

Bioactivity:  
Sanguinarine, a benzophenanthridine alkaloid derived from the root of Sanguinaria Canadensis, can stimulate apoptosis via activating the production of reactive oxygen species (ROS). Sanguinarine-induced apoptosis is associated with the activation of JNK and NF-κB.

Purity:  
>98%

Clinical Data:  
No Development Reported

Size:  
5 mg, 10 mg

---

**Sanguinarine chloride**  
(Pseudochelerythrine chloride; Sanguinarium chloride)  
Cat. No.: HY-N0052A

Bioactivity:  
Sanguinarine chloride, a benzophenanthridine alkaloid derived from the root of Sanguinaria Canadensis, can stimulate apoptosis via activating the production of reactive oxygen species (ROS). Sanguinarine-induced apoptosis is associated with the activation of JNK and NF-κB.

Purity:  
99.80%

Clinical Data:  
No Development Reported

Size:  
10mM x 1mL in DMSO, 5 mg, 10 mg

---

**Silvestrol**  
((-)-Silvestrol)  
Cat. No.: HY-13251

Bioactivity:  
Silvestrol is a eukaryotic translation initiation factor 4A (elf4A) inhibitor isolated from the fruits and twigs of Aglaia foveolata.

Purity:  
98.00%

Clinical Data:  
No Development Reported

Size:  
10mM x 1mL in DMSO, 1 mg, 2 mg

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**Taurochenedoxycholic acid**  
(12-Deoxycholyltaurine)  
Cat. No.: HY-N2027

Bioactivity:  
Taurochenedoxycholic acid is one of the main bioactive substances of animals' bile acid.

Purity:  
99.80%

Clinical Data:  
Launched

Size:  
10mM x 1mL in DMSO, 50 mg

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**Taurodeoxychloic Acid sodium hydrate**  
(Sodium taurodeoxycholate monohydrate)  
Cat. No.: HY-B1899A

Bioactivity:  
Taurodeoxychloic Acid (sodium hydrate) prevents apoptosis by blocking a calcium-mediated apoptotic pathway as well as caspase-12 activation. Taurodeoxychloic Acid (sodium hydrate) is investigated for use in several conditions such as Primary Biliary Cirrhosis (PBC), insulin resistance, amyloidosis, etc.

Purity:  
98.81%

Clinical Data:  
Launched

Size:  
10mM x 1mL in DMSO, 5 mg, 10 mg, 50 mg, 100 mg

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**Trabectedin**  
(Ecteinascidin 743; ET-743)  
Cat. No.: HY-50936

Bioactivity:  
Trabectedin (Ecteinascidin-743 or ET-743) is a novel antitumour agent of marine origin with potent antitumour activity both in vitro and in vivo. IC50 Value: 0.1-3.7 nM (breast cancer cell lines) [1] Target: Apoptosis inducer; Anticancer in vitro: Trabectedin induced cytotoxicity and...

Purity:  
99.83%

Clinical Data:  
Launched

Size:  
1 mg

---

**Ubiquitin Isopeptidase Inhibitor I, G5**  
(NSC144303)  
Cat. No.: HY-100738

Bioactivity:  
Ubiquitin Isopeptidase Inhibitor I, G5 (NSC 144303) is an apoptosis-independent caspase and apoptosis activator with IC50 values of 1.76 and 1.6 μM in E1A and E1A/C9DN cells, respectively.

Purity:  
98.0%

Clinical Data:  
No Development Reported

Size:  
10mM x 1mL in DMSO, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

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**[6]-Gingerol**  
((S)-(+)-[6]Gingerol; 6-Gingerol)  
Cat. No.: HY-14615

Bioactivity:  
[6]-Gingerol is an active compound isolated from Ginger (Zingiber officinale Rosc), exhibits a variety of biological activities including anticancer, anti-inflammation, and anti-oxidation.

Purity:  
98.01%

Clinical Data:  
No Development Reported

Size:  
10mM x 1mL in DMSO, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

---
Bcl-2 Family

Bcl-2 is a family of evolutionarily related proteins. These proteins govern mitochondrial outer membrane permeabilization (MOMP) and can be either pro-apoptotic (Bax, Bad, Bak and Bok among others) or anti-apoptotic (including Bcl-2 proper, Bcl-xL, and Bcl-w, among an assortment of others). There are a total of 25 genes in the Bcl-2 family known to date. Human genes encoding proteins that belong to this family include: Bak1, Bax, Bal-2, Bok, Mcl-1.
### Bcl-2 Family Inhibitors & Modulators

#### (+)-Apogossypol

**Bioactivity:** (+)-Apogossypol is a pan-BCL-2 antagonist. (+)-Apogossypol binds to Mcl-1, Bcl-2 and Bcl-xL with EC\textsubscript{50} of 2.6, 2.8 and 3.69 \(\mu\)M, respectively.

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

**Cat. No.: HY-13408**

#### (R)-(-)-Gossypol acetic acid

**Bioactivity:** (R)-(−)-Gossypol acetic acid (AT-101 (acetic acid); AT-101 (acetic acid); (-)-Gossypol acetic acid) is the levorotatory isomer of a natural product Gossypol. AT-101 is determined to bind to Bcl-2, Mcl-1 and Bcl-xL proteins with \(K\textsubscript{i}\) of 260±30 nM, 170±10 nM, and 480±40 nM, respectively.

| Purity: | 97.40% |
| Clinical Data: | Phase 2 |
| Size: | 10 mM x 1 mL in DMSO, 10 mg, 50 mg |

**Cat. No.: HY-15464**

#### A-1155463

**Bioactivity:** A-1155463 is a highly potent and selective BCL-X\textsubscript{L} inhibitor with an EC\textsubscript{50} of 70 nM in Molt-4 cell.

| Purity: | 98.55% |
| Clinical Data: | No Development Reported |
| Size: | 10 mM x 1 mL in DMSO, 5 mg, 10 mg, 50 mg, 100 mg |

**Cat. No.: HY-19725**

#### A-1331852

**Bioactivity:** A-1331852 is an orally available BCL-X\textsubscript{L} selective inhibitor with a \(K\textsubscript{i}\) of less than 10 pM.

| Purity: | 99.21% |
| Clinical Data: | No Development Reported |
| Size: | 10 mM x 1 mL in DMSO, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg |

**Cat. No.: HY-19741**

#### ABT-737

**Bioactivity:** ABT-737 is a selective and BH3 mimetic Bcl-xL, Bcl-2 and Bcl-w inhibitor with EC\textsubscript{50} of 78.7 nM, 30.3 nM and 197.8 nM, respectively.

| Purity: | 99.59% |
| Clinical Data: | No Development Reported |
| Size: | 10 mM x 1 mL in DMSO, 5 mg, 10 mg, 50 mg, 100 mg, 200 mg |

**Cat. No.: HY-50907**

#### AMG-176

**Bioactivity:** AMG-176 is a potent, selective and orally bioavailable MCL-1 inhibitor, with a \(K\textsubscript{i}\) of 0.13 nM.

| Purity: | 98.96% |
| Clinical Data: | No Development Reported |
| Size: | 10 mM x 1 mL in DMSO, 1 mg, 5 mg |

**Cat. No.: HY-101565**

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<table>
<thead>
<tr>
<th>Compound</th>
<th>Cat. No.</th>
<th>Bioactivity</th>
<th>Purity</th>
<th>Clinical Data</th>
<th>Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>AZD-5991</td>
<td>HY-101533</td>
<td>AZD-5991 is a potent and selective Mcl-1 inhibitor with an IC&lt;sub&gt;50&lt;/sub&gt; of 0.7 nM in FRET assay and a K&lt;sub&gt;d&lt;/sub&gt; of 0.17 nM in surface plasmon resonance (SPR) assay.</td>
<td>99.50%</td>
<td>No Development Reported</td>
<td>10mM x 1mL in DMSO, 5 mg, 10 mg, 25 mg, 50 mg</td>
</tr>
<tr>
<td>AZD-5991 Racemate</td>
<td>HY-101533A</td>
<td>AZD-5991 Racemate is the racemate of AZD-5991. AZD-5991 Racemate is a Mcl-1 inhibitor with an IC&lt;sub&gt;50&lt;/sub&gt; of &lt;3 nM in FRET assay.</td>
<td>&gt;98%</td>
<td>No Development Reported</td>
<td>250 mg, 500 mg</td>
</tr>
<tr>
<td>AZD-5991 S-enantiomer</td>
<td>HY-101533B</td>
<td>AZD-5991 S-enantiomer is the less active enantiomer of AZD-5991. AZD-5991 S-enantiomer is a Mcl-1 inhibitor with an IC&lt;sub&gt;50&lt;/sub&gt; of 6.3 μM in FRET assay and a K&lt;sub&gt;d&lt;/sub&gt; of 0.98 μM in surface plasmon resonance (SPR) assay.</td>
<td>&gt;98%</td>
<td>No Development Reported</td>
<td>500 mg</td>
</tr>
<tr>
<td>AZD4320</td>
<td>HY-112416</td>
<td>AZD4320 is a novel BH3-mimicking dual BCL2/BCLxL inhibitor with IC&lt;sub&gt;50&lt;/sub&gt; of 26 nM, 17 nM, and 170 nM for KPUM-MS3, KPUM-UH1, and STR-428 cells, respectively.</td>
<td>&gt;98%</td>
<td>No Development Reported</td>
<td>250 mg, 500 mg</td>
</tr>
<tr>
<td>BAI1</td>
<td>HY-103269</td>
<td>BAI1 is a direct allostic inhibitor of BAX.</td>
<td>99.72%</td>
<td>No Development Reported</td>
<td>10mM x 1mL in DMSO, 5 mg, 10 mg, 25 mg, 50 mg</td>
</tr>
<tr>
<td>Bak BH3</td>
<td>HY-0300</td>
<td>Bak BH3 is derived from the BH3 domain of Bak, can antagonize the function of Bcl-xL in cells.</td>
<td>&gt;98%</td>
<td>No Development Reported</td>
<td>1 mg, 5 mg, 10 mg</td>
</tr>
<tr>
<td>BAM7</td>
<td>HY-15341</td>
<td>BAM7 is a direct and selective activator of proapoptotic BAX with an IC&lt;sub&gt;50&lt;/sub&gt; of 3.3 μM.</td>
<td>99.57%</td>
<td>No Development Reported</td>
<td>10mM x 1mL in DMSO, 10 mg, 50 mg</td>
</tr>
<tr>
<td>Bax activator-1</td>
<td>HY-122760</td>
<td>Bax activator-1 (compound 106) is a Bax activator that induces Bax-dependent tumor cell apoptosis.</td>
<td>&gt;98%</td>
<td>No Development Reported</td>
<td>500 mg, 250 mg</td>
</tr>
<tr>
<td>Bax inhibitor peptide V5 (BIP-V5; BAX Inhibiting Peptide V5)</td>
<td>HY-00081</td>
<td>Bax inhibitor peptide V5 is a Bax-mediated apoptosis inhibitor, used for cancer treatment.</td>
<td>99.79%</td>
<td>No Development Reported</td>
<td>5 mg, 10 mg, 25 mg, 50 mg</td>
</tr>
<tr>
<td>BH3I-1</td>
<td>HY-100383</td>
<td>BH3I-1 is a Bcl-2 family antagonist, which inhibits the binding of the Bax BH3 peptide to Bcl-xL with a K&lt;sub&gt;d&lt;/sub&gt; of 2.4±0.2 μM in FP assay. BH3I-1 has a K&lt;sub&gt;d&lt;/sub&gt; of 5.3 μM against the p53/MDM2 pair.</td>
<td>98.0%</td>
<td>No Development Reported</td>
<td>10mM x 1mL in DMSO, 2 mg, 5 mg, 10 mg, 25 mg, 50 mg</td>
</tr>
<tr>
<td><strong>BM 957</strong></td>
<td><strong>Cat. No.: HY-18106</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td>---</td>
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<td></td>
</tr>
<tr>
<td><strong>Bioactivity:</strong></td>
<td>BM 957 is a potent Bcl-2 and Bcl-xL inhibitor, with $K_i$ of 1.2, &lt;1 nM and $IC_{50}$ of 5.4, 6.0 nM respectively.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Purity:</strong></td>
<td>&gt;98%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Clinical Data:</strong></td>
<td>No Development Reported</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Size:</strong></td>
<td>250 mg, 500 mg</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| **Dehydrocorydaline**  
(13-Methylpalmatine) | **Cat. No.: HY-N0674** |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bioactivity:</strong></td>
<td>Dehydrocorydaline (13-Methylpalmatine) is an alkaloid isolated from traditional Chinese herb Corydalis yanhusuo W.T. Wang. Dehydrocorydaline regulates protein expression of Bax, Bcl-2, caspase-7, caspase-8, and inactivates PARP.</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, 50 mg</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Ginsenoside Rh4</strong></th>
<th><strong>Cat. No.: HY-N0905</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bioactivity:</strong></td>
<td>Ginsenoside Rh4 is a rare saponin obtained from Panax notoginseng. Ginsenoside Rh4 activates Bax, caspase 3, caspase 8, and caspase 9. Ginsenoside Rh4 also induces autophagy.</td>
</tr>
<tr>
<td><strong>Purity:</strong></td>
<td>98.40%</td>
</tr>
<tr>
<td><strong>Clinical Data:</strong></td>
<td>No Development Reported</td>
</tr>
<tr>
<td><strong>Size:</strong></td>
<td>10 mM x 1 mL in DMSO, 5 mg, 10 mg</td>
</tr>
</tbody>
</table>

| **Gossypol**  
(BL 193) | **Cat. No.: HY-13407** |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bioactivity:</strong></td>
<td>Gossypol, a natural product isolated from cottonseeds and roots, binds to Bcl-xL protein and Bcl-2 protein with $K_i$ of 0.5-0.6 μM and 0.2-0.3 mM, respectively.</td>
</tr>
<tr>
<td><strong>Purity:</strong></td>
<td>&gt;98%</td>
</tr>
<tr>
<td><strong>Clinical Data:</strong></td>
<td>Phase 3</td>
</tr>
<tr>
<td><strong>Size:</strong></td>
<td>100 mg, 200 mg, 500 mg</td>
</tr>
</tbody>
</table>

| **Gossypol acetic acid**  
((±)-Gossypol-acetic acid; BL 193 (acetic acid)) | **Cat. No.: HY-17510** |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bioactivity:</strong></td>
<td>Gossypol, a natural product isolated from cottonseeds and roots, binds to Bcl-xL protein and Bcl-2 protein with $K_i$ of 0.5-0.6 μM and 0.2-0.3 mM, respectively.</td>
</tr>
<tr>
<td><strong>Purity:</strong></td>
<td>99.41%</td>
</tr>
<tr>
<td><strong>Clinical Data:</strong></td>
<td>Phase 3</td>
</tr>
<tr>
<td><strong>Size:</strong></td>
<td>10 mM x 1 mL in DMSO, 200 mg, 500 mg</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>HA14-1</strong></th>
<th><strong>Cat. No.: HY-12011</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bioactivity:</strong></td>
<td>HA14-1 is a Bcl-2/ Bcl-XL antagonist. HA14-1 binds the designated pocket on Bcl-2 with the $IC_{50}$ of =9 μM in competing with the Bcl-2 binding of Flu-BakBH3, and inhibits its function.</td>
</tr>
<tr>
<td><strong>Purity:</strong></td>
<td>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 x 1 mL in DMSO, 10 mg, 50 mg</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Jaceosidin</strong></th>
<th><strong>Cat. No.: HY-N0831</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bioactivity:</strong></td>
<td>Jaceosidin is a flavonoid isolated from Artemisia vestita, induces apoptosis in cancer cells, activates Bax and down-regulates Mcl-1 and c-FLIP expression $^{[1]}$. Jaceosidin exhibits anti-cancer $^{[2]}$, anti-inflammatory activity...</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>
</tr>
<tr>
<td><strong>Size:</strong></td>
<td>10 mM x 1 mL in DMSO, 1 mg, 5 mg, 10 mg, 25 mg</td>
</tr>
</tbody>
</table>

---

Bioactivity:

BM 957 is a potent Bcl-2 and Bcl-xL inhibitor, with $K_i$ of 1.2, <1 nM and $IC_{50}$ of 5.4, 6.0 nM respectively.

Purity: >98%

Clinical Data: No Development Reported

Size: 250 mg, 500 mg

Dehydrocorydaline (13-Methylpalmatine) is an alkaloid isolated from traditional Chinese herb Corydalis yanhusuo W.T. Wang. Dehydrocorydaline regulates protein expression of Bax, Bcl-2, caspase-7, caspase-8, and inactivates PARP.

Purity: >98%

Clinical Data: No Development Reported

Size: 5 mg, 10 mg, 50 mg

Ginsenoside Rh4 is a rare saponin obtained from Panax notoginseng. Ginsenoside Rh4 activates Bax, caspase 3, caspase 8, and caspase 9. Ginsenoside Rh4 also induces autophagy.

Purity: 98.40%

Clinical Data: No Development Reported

Size: 10 mM x 1 mL in DMSO, 5 mg, 10 mg

Gossypol, a natural product isolated from cottonseeds and roots, binds to Bcl-xL protein and Bcl-2 protein with $K_i$ of 0.5-0.6 μM and 0.2-0.3 mM, respectively.

Purity: >98%

Clinical Data: Phase 3

Size: 100 mg, 200 mg, 500 mg

Gossypol acetic acid, a natural product isolated from cottonseeds and roots, binds to Bcl-xL protein and Bcl-2 protein with $K_i$ of 0.5-0.6 μM and 0.2-0.3 mM, respectively.

Purity: 99.41%

Clinical Data: Phase 3

Size: 10 mM x 1 mL in DMSO, 200 mg, 500 mg

HA14-1 is a Bcl-2/ Bcl-XL antagonist. HA14-1 binds the designated pocket on Bcl-2 with the $IC_{50}$ of =9 μM in competing with the Bcl-2 binding of Flu-BakBH3, and inhibits its function.

Purity: 98.0%

Clinical Data: No Development Reported

Size: 10 mM x 1 mL in DMSO, 10 mg, 50 mg

Jaceosidin is a flavonoid isolated from Artemisia vestita, induces apoptosis in cancer cells, activates Bax and down-regulates Mcl-1 and c-FLIP expression $^{[1]}$. Jaceosidin exhibits anti-cancer $^{[2]}$, anti-inflammatory activity...
<table>
<thead>
<tr>
<th>Product</th>
<th>Catalog No.</th>
<th>Bioactivity</th>
<th>Purity</th>
<th>Clinical Data</th>
<th>Size</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Maritoclax</strong>&lt;br&gt;(Marinopyrrole A)</td>
<td>HY-15613</td>
<td>Maritoclax (Marinopyrrole A) is a novel and specific Mcl-1 inhibitor with an IC&lt;sub&gt;50&lt;/sub&gt; value of 10.1 μM, and shows &gt;8 fold selectivity than BCL-xL (IC&lt;sub&gt;50&lt;/sub&gt; &gt; 80 μM).</td>
<td>99.97%</td>
<td>No Development Reported</td>
<td>10mM x 1mL in DMSO, 5 mg, 10 mg, 50 mg, 100 mg</td>
</tr>
<tr>
<td><strong>Mcl1-IN-1</strong></td>
<td>HY-16669</td>
<td>Mcl1-IN-1 is an inhibitor of myeloid cell factor 1 (Mcl-1) (IC&lt;sub&gt;50&lt;/sub&gt; = 2.4 μM).</td>
<td>96.64%</td>
<td>No Development Reported</td>
<td>10mM x 1mL in DMSO, 5 mg, 10 mg, 50 mg, 100 mg</td>
</tr>
<tr>
<td><strong>Mcl1-IN-2</strong></td>
<td>HY-12826</td>
<td>Mcl1-IN-2 is an inhibitor of myeloid cell factor 1 (Mcl-1).</td>
<td>95.0%</td>
<td>No Development Reported</td>
<td>10mM x 1mL in DMSO, 5 mg, 10 mg, 50 mg</td>
</tr>
<tr>
<td><strong>Mcl1-IN-3</strong></td>
<td>HY-111468</td>
<td>Mcl1-IN-3 is an inhibitor of Mcl1 extracted from patent WO2015153959A2, compound example 57; has an IC&lt;sub&gt;50&lt;/sub&gt; and K&lt;sub&gt;i&lt;/sub&gt; of 0.67 and 0.13 μM, respectively.</td>
<td>&gt;98%</td>
<td>No Development Reported</td>
<td>250 mg, 500 mg</td>
</tr>
<tr>
<td><strong>Mcl1-IN-4</strong></td>
<td>HY-111467</td>
<td>Mcl1-IN-4 is an inhibitor of Mcl1 with an IC&lt;sub&gt;50&lt;/sub&gt; of 0.2 μM.</td>
<td>&gt;98%</td>
<td>No Development Reported</td>
<td>250 mg, 500 mg</td>
</tr>
<tr>
<td><strong>MIK665</strong>&lt;br&gt;(S-64315)</td>
<td>HY-112218</td>
<td>MIK665 (S-64315) is a special Mcl-1 inhibitor extracted from patent WO2016207225A1, compound Preparation 13, has an IC&lt;sub&gt;50&lt;/sub&gt; of 1.81 nM&lt;sup&gt;[1]&lt;/sup&gt;.</td>
<td>98.0%</td>
<td>No Development Reported</td>
<td>10mM x 1mL in DMSO, 5 mg, 10 mg, 50 mg</td>
</tr>
<tr>
<td><strong>MIM1</strong>&lt;br&gt;(Inhibitor of Mcl-1)</td>
<td>HY-16695</td>
<td>MIM1 is an inhibitor of myeloid cell factor 1 (Mcl-1).</td>
<td>&gt;98%</td>
<td>No Development Reported</td>
<td>5 mg, 10 mg</td>
</tr>
<tr>
<td><strong>ML311</strong></td>
<td>HY-101778</td>
<td>ML311 is a potent and selective inhibitor of the Mcl-1/Bim interaction.</td>
<td>98.04%</td>
<td>No Development Reported</td>
<td>10mM x 1mL in DMSO, 5 mg, 10 mg, 50 mg, 100 mg</td>
</tr>
<tr>
<td><strong>Navitoclax</strong>&lt;br&gt;(ABT-263)</td>
<td>HY-10087</td>
<td>Navitoclax (ABT-263) is a potent and oral Bcl-2 family protein inhibitor that binds to multiple anti-apoptotic Bcl-2 family proteins, such as Bcl-x&lt;sub&gt;L&lt;/sub&gt;, Bcl-2 and Bcl-w, with a Ki of less than 1 nM.</td>
<td>99.97%</td>
<td>Phase 2</td>
<td>10mM x 1mL in DMSO, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg</td>
</tr>
</tbody>
</table>

<sup>[1]</sup>Tel: 609-228-6898 Fax: 609-228-5909 Email: sales@MedChemExpress.com
NPB  
**Bioactivity:** NPB is a specific and potent inhibitor of BAD phosphorylation at Ser99, with an IC$_{50}$ of 0.41 μM [1].

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

---

Obatoclax  
(Obatoclax Mesylate; GX15-070)  
**Cat. No.: HY-10969**

**Bioactivity:** Obatoclax is an inhibitor of the BCL-2 family proteins. It binds to BCL-2 with a K$_d$ of 220 nM.

**Purity:** 99.20%
**Clinical Data:** Phase 3
**Size:** 10mM x 1mL in DMSO, 5 mg, 10 mg, 50 mg, 100 mg

---

PUMA BH3  
**Cat. No.: HY-P1562**

**Bioactivity:** PUMA BH3 is a p53 upregulated modulator of apoptosis (PUMA) BH3 domain peptide, acts as a direct activator of Bak, with a K$_d$ of 26 nM.

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

---

Pyridoclax  
(MR-29072)  
**Cat. No.: HY-12527**

**Bioactivity:** Pyridoclax is a potential Mcl-1 inhibitor.

**Purity:** >98%
**Clinical Data:** No Development Reported
**Size:** 10mM x 1mL in DMSO, 5 mg, 10 mg, 50 mg, 100 mg

---

S55746  
(BLC201)  
**Cat. No.: HY-117288**

**Bioactivity:** S55746 is an orally active, selective and potent BCL-2 inhibitor, with a K$_d$ of 1.3 nM.

**Purity:** 98.97%
**Clinical Data:** No Development Reported
**Size:** 10mM x 1mL in DMSO, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

---

S55746 hydrochloride  
(BLC201 (hydrochloride))  
**Cat. No.: HY-117288A**

**Bioactivity:** S55746 hydrochloride is a potent, orally active and selective BCL-2 inhibitor, with K$_d$ and K$_{IC50}$ of 1.3 nM, 520 nM and 3.9 nM, 186 nM for BCL-2 and BCL-XL, respectively. S55746 hydrochloride has antitumor activity.

**Purity:** >98%
**Clinical Data:** No Development Reported
**Size:** 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

---

S63845  
(BI-97C1)  
**Cat. No.: HY-100741**

**Bioactivity:** S63845 is a potent and selective myeloid cell leukemia 1 (MCL1) inhibitor with a K$_d$ of 0.19 nM for human MCL1.

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

---

Sabutoclax  
**Cat. No.: HY-15191**

**Bioactivity:** Sabutoclax is a potent and effective Bcl-2 Family (Bcl-2, Bcl-XL, Mcl-1, Bfl-1) inhibitor with IC$_{50}$ of 0.32 μM, 0.31 μM, 0.20 μM, and 0.62 μM, respectively.

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

---

Thevetiaflavone  
(Apigenin-5-methyl ether)  
**Cat. No.: HY-N1157**

**Bioactivity:** Thevetiaflavone could upregulate the expression of Bcl2 and downregulate that of Bax and caspase3.

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

---

TW-37  
**Cat. No.: HY-12020**

**Bioactivity:** TW-37 is a potent Bcl-2 inhibitor with K$_i$ values of 260, 290 and 1110 nM for Mcl-1, Bcl-2 and Bcl-xL, respectively.

**Purity:** 98.50%
**Clinical Data:** No Development Reported
**Size:** 10mM x 1mL in DMSO, 10 mg, 50 mg
### UMI-77

**Cat. No.: HY-18628**

**Bioactivity:** UMI-77 is a selective Mcl-1 inhibitor, which shows high binding affinity to Mcl-1 ($IC_{50}=0.31 \mu M$). UMI-77 binds to the BH3 binding groove of Mcl-1 with $K_i$ of 490 nM, showing selectivity over other members of anti-apoptotic Bc...

<table>
<thead>
<tr>
<th>Purity</th>
<th>98.67%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinical Data</td>
<td>No Development Reported</td>
</tr>
<tr>
<td>Size</td>
<td>10mM x 1mL in DMSO, 5 mg, 10 mg, 30 mg</td>
</tr>
</tbody>
</table>

### Venetoclax (ABT-199; GDC-0199)

**Cat. No.: HY-15531**

**Bioactivity:** Venetoclax (ABT-199; GDC-0199) is a highly potent, selective and orally bioavailable Bcl-2 inhibitor with a $K_i$ of less than 0.01 nM.

<table>
<thead>
<tr>
<th>Purity</th>
<th>99.95%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinical Data</td>
<td>Launched</td>
</tr>
<tr>
<td>Size</td>
<td>10mM x 1mL in DMSO, 5 mg, 10 mg, 50 mg, 100 mg, 200 mg, 500 mg</td>
</tr>
</tbody>
</table>

### VU0661013

**Cat. No.: HY-112859**

**Bioactivity:** VU661013 is a potent and selective MCL-1 inhibitor.

<table>
<thead>
<tr>
<th>Purity</th>
<th>98.42%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinical Data</td>
<td>No Development Reported</td>
</tr>
<tr>
<td>Size</td>
<td>10mM x 1mL in DMSO, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg</td>
</tr>
</tbody>
</table>

### WEHI-539

**Cat. No.: HY-15607**

**Bioactivity:** WEHI-539 is a selective inhibitor of Bcl-X<sub>L</sub> with $IC_{50}$ of 1.1 nM.

<table>
<thead>
<tr>
<th>Purity</th>
<th>&gt;98%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinical Data</td>
<td>No Development Reported</td>
</tr>
<tr>
<td>Size</td>
<td>5 mg, 10 mg, 50 mg, 100 mg</td>
</tr>
</tbody>
</table>

**Bioactivity:** WEHI-539 hydrochloride is a selective inhibitor of Bcl-X<sub>L</sub> with an $IC_{50}$ of 1.1 nM.

<table>
<thead>
<tr>
<th>Purity</th>
<th>97.85%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinical Data</td>
<td>No Development Reported</td>
</tr>
<tr>
<td>Size</td>
<td>10mM x 1mL in DMSO, 5 mg, 10 mg, 50 mg</td>
</tr>
</tbody>
</table>
c-Myc

Myc

c-Myc is the master transcription factor for cell proliferation and is involved in numerous hematological and solid cancers. Proto-oncogene c-Myc, encoding one of the most important transcription factors, plays a pivotal role in tumor initiation and progression. c-Myc regulates hundreds of disparate target genes that participate numerous biological effects, such as cell proliferation, apoptosis, differentiation, and stem cell self-renewal. c-Myc is one of the four factors used in reprogramming somatic cells to induce pluripotent stem (iPS) cells and is implicated in maintaining cancer stem-like cells (CSCs).

The transcription factor c-Myc is a key mediator of the Notch signaling–regulated T cell differentiation. In a well-established in vitro differentiation model of T lymphocytes from hematopoietic stem cells, Notch1 and 4 directly promotes c-Myc expression; dominant-negative (DN) c-Myc inhibits early T cell differentiation. Moreover, the c-Myc expression activated by Notch signaling increases the expression of survivin, an inhibitor of apoptosis (IAP) protein.

c-Myc gene, as a transcription factor of hTERT, is over expressed in a variety of tumors. c-Myc and hTERT expression in local recurrent gastric cancer tissues is much higher than in primary gastric cancer tissues at the protein and mRNA levels.
### c-Myc Inhibitors & Modulators

<table>
<thead>
<tr>
<th>Product</th>
<th>Cat. No.</th>
<th>Bioactivity</th>
<th>Purity</th>
<th>Clinical Data</th>
<th>Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>10058-F4</td>
<td>HY-12702</td>
<td>10058-F4 is a c-Myc inhibitor that prevents c-Myc-Max dimerization and transactivation of c-Myc target gene expression.</td>
<td>99.92%</td>
<td>No Development Reported</td>
<td>10mM x 1mL in DMSO, 5 mg, 10 mg, 50 mg</td>
</tr>
<tr>
<td>IZCZ-3</td>
<td>HY-111411</td>
<td>IZCZ-3 is a potent c-MYC transcription inhibitor with antitumor activity.</td>
<td>&gt;98%</td>
<td>No Development Reported</td>
<td>500 mg, 100 mg, 250 mg</td>
</tr>
<tr>
<td>KSI-3716</td>
<td>HY-12703</td>
<td>KSI-3716 is a c-Myc inhibitor.</td>
<td>&gt;98%</td>
<td>No Development Reported</td>
<td>250 mg, 500 mg</td>
</tr>
<tr>
<td>Mycro 3</td>
<td>HY-100669</td>
<td>Mycro 3 is potent and selective for c-Myc in whole cell assays.</td>
<td>98.63%</td>
<td>No Development Reported</td>
<td>10mM x 1mL in DMSO, 2 mg, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg</td>
</tr>
<tr>
<td>10074-G5</td>
<td>HY-100996</td>
<td>10074-G5 is an inhibitor of c-Myc-Max dimerization with an IC_{50} of 146 μM.</td>
<td>97.07%</td>
<td>No Development Reported</td>
<td>10mM x 1mL in DMSO, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg</td>
</tr>
<tr>
<td>KJ Pyr 9</td>
<td>HY-19735</td>
<td>KJ Pyr 9 is an inhibitor of MYC with a K_d of 6.5 nM in vitro assay.</td>
<td>99.25%</td>
<td>No Development Reported</td>
<td>10mM x 1mL in DMSO, 5 mg, 10 mg, 50 mg, 100 mg</td>
</tr>
<tr>
<td>ML327</td>
<td>HY-103038</td>
<td>ML327 is a blocker of MYC which can also de-repress E-cadherin transcription and reverse Epithelial-to-Mesenchymal Transition (EMT).</td>
<td>98.04%</td>
<td>No Development Reported</td>
<td>10mM x 1mL in DMSO, 1 mg, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg</td>
</tr>
</tbody>
</table>
Caspase

Caspase is a family of cysteine proteases that play essential roles in apoptosis (programmed cell death), necrosis, and inflammation. There are two types of apoptotic caspases: initiator (apical) caspases and effector (executioner) caspases. Initiator caspases (e.g., CASP2, CASP8, CASP9, and CASP10) cleave inactive pro-forms of effector caspases, thereby activating them. Effector caspases (e.g., CASP3, CASP6, CASP7) in turn cleave other protein substrates within the cell, to trigger the apoptotic process. The initiation of this cascade reaction is regulated by caspase inhibitors. CASP4 and CASP5, which are overexpressed in some cases of vitiligo and associated autoimmune diseases caused by NALP1 variants, are not currently classified as initiator or effector in MeSH, because they are inflammatory enzymes that, in concert with CASP1, are involved in T-cell maturation.
Caspase Inhibitors & Modulators

2-HBA
Cat. No.: HY-103667

Bioactivity: 2-HBA is a potent inducer of NAD(P)H:quinone acceptor oxidoreductase 1 (NQO1) which can also activate caspase-3 and caspase-10.

Purity: 98.83%
Clinical Data: No Development Reported
Size: 10mM x 1mL in DMSO, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

Ac-DEVD-CHO
Cat. No.: HY-P1001

Bioactivity: Ac-DEVD-CHO is a specific Caspase-3 inhibitor with a $K_i$ value of 230 pM.

Purity: 98.84%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

Belnacasan (VX-765)
Cat. No.: HY-13205

Bioactivity: Belnacasan (VX-765) is a orally active IL-converting enzyme (ICE)/ caspase-1 inhibitor, which inhibits the release of LPS-induced IL-1β and IL-1β by human PBMCs with an IC₅₀ of ~0.7 μM [1].

Purity: 99.99%
Clinical Data: Phase 2
Size: 10mM x 1mL in DMSO, 5 mg, 10 mg, 50 mg, 100 mg

Biotin-VAD-FMK
Cat. No.: HY-100894

Bioactivity: Biotin-VAD-FMK is a cell permeable, irreversible biotin-labeled caspase inhibitor, used to identify active caspases in cell lysates.

Purity: 98.0%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

BOC-D-FMK
Cat. No.: HY-13229

Bioactivity: Boc-D-FMK is a cell-permeable, irreversible and broad spectrum caspase inhibitor; inhibits apoptosis stimulated by TNF-α with an IC₅₀ of 30 μM.

Purity: 95.0%
Clinical Data: No Development Reported
Size: 10mM x 1mL in DMSO, 1 mg, 5 mg, 10 mg, 50 mg

Chelidonic acid
Cat. No.: HY-W041489

Bioactivity: Chelidonic acid is a component of Chelidonium majus L., used as a mild analgesic, an antimicrobial, an acental nervous system sedative. Chelidonic acid also shows anti-inflammatory activity. Chelidonic acid has potential to inhibit IL-6 production by blocking NF-κB and caspase-1 [1]. Chelidonic acid is a component of Chelidonium majus L., used as a mild analgesic, an antimicrobial, an acental nervous system sedative. Chelidonic acid also shows anti-inflammatory activity. Chelidonic acid has potential to inhibit IL-6 production by blocking NF-κB and caspase-1 [1].

Purity: 97.0%
Clinical Data: No Development Reported
Size: 10mM x 1mL in DMSO, 100 mg

Dehydrocorydaline (13-Methylpalmatine)
Cat. No.: HY-N0674

Bioactivity: Dehydrocorydaline (13-Methylpalmatine) is an alkaloid isolated from traditional Chinese herb Corydalis yanhusuo W.T. Wang. Dehydrocorydaline regulates protein expression of Bax, Bcl-2, activates caspase-7, caspase-8, and inactivates PARP.

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

Emricasan (PF 03491390; IDN-6556)
Cat. No.: HY-10396

Bioactivity: Emricasan (PF 03491390) is an irreversible pan-caspase inhibitor.

Purity: 99.73%
Clinical Data: Phase 2
Size: 10mM x 1mL in DMSO, 5 mg, 10 mg, 50 mg, 100 mg

EP1013 (F1013)
Cat. No.: HY-10397

Bioactivity: EP1013 is a broad-spectrum caspase selective inhibitor, used in the research of type 1 diabetes.

Purity: 97.76%
Clinical Data: No Development Reported
Size: 10mM x 1mL in DMSO, 1 mg, 5 mg, 10 mg, 50 mg, 100 mg

Ginsenoside Rh2
Cat. No.: HY-N0605


Purity: 98.0%
Clinical Data: No Development Reported
Size: 10mM x 1mL in DMSO, 5 mg, 10 mg
Ginsenoside Rh4

Cat. No.: HY-N0905

Bioactivity: Ginsenoside Rh4 is a rare saponin obtained from Panax notoginseng. Ginsenoside Rh4 activates Bax, caspase 3, caspase 8, and caspase 9. Ginsenoside Rh4 also induces autophagy.

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

ML132 (NCGC 00185682)
Cat. No.: HY-12412

Bioactivity: ML132 (NCGC 00185682) is a potent and selective caspase 1 inhibitor with an IC50 of 0.316 nM.

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

Purity: 99.80%
Clinical Data: Launched
Size: 10mM x 1mL in DMSO, 1 mg, 5 mg, 10 mg, 25 mg, 50 mg

Q-VD-OPh (Quinoline-Val-Asp-Difluorophenoxymethylketone)
Cat. No.: HY-12305

Bioactivity: Q-VD-OPh is an irreversible pan-caspase inhibitor with potent antiapoptotic properties; inhibits caspase 7 with IC50 of 48 nM and 25-400 nM for other caspases including caspase 1, 3, 8, 9, 10, and 12. Q-VD-OPh is able to cross the blood-brain barrier.

Purity: 99.26%
Clinical Data: No Development Reported
Size: 10mM x 1mL in DMSO, 5 mg, 10 mg

Bioactivity: Taurochenodeoxycholic acid is one of the main bioactive substances of animals’ bile acid.

Purity: 95.98%
Clinical Data: Phase 1
Size: 10mM x 1mL in DMSO, 10 mg, 50 mg

Bioactivity: Taurodeoxychloic Acid (sodium hydrate) prevents apoptosis by blocking a calcium-mediated apoptotic pathway as well as caspase-12 activation. Taurodeoxychloic Acid (sodium hydrate) is investigated for use in several conditions such as Primary Biliary Cirrhosis (PBC), insulin resistance, amyloidosis, ...

Purity: 99.80%
Clinical Data: Launched
Size: 10mM x 1mL in DMSO, 10 mg, 50 mg

Bioactivity: Tauroursodeoxycholate is an activator of procaspase-3 induces apoptosis in cancer cells with EC50 of 2.08 μM.

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

Bioactivity: Tauroursodeoxycholate dihydrate (TUDCA dihydrate; UR 906 dihydrate; Taurolite dihydrate) 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 and caspase-12. Tauroursodeoxycholate also inhibits ERK (1).

Purity: 97.07%
Clinical Data: Launched
Size: 10mM x 1mL in DMSO, 50 mg

Bioactivity: Tauroursodeoxycholate Sodium 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: 97.07%
Clinical Data: Launched
Size: 10mM x 1mL in Water, 100 mg, 500 mg

Bioactivity: Thevetiaflavone could upregulate the expression of Bcl2 and downregulate that of Bax and caspase3.

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

Bioactivity: Taurodeoxycholic Acid sodium hydrate (Sodium taurodeoxycholate monohydrate) prevents apoptosis by blocking a calcium-mediated apoptotic pathway as well as caspase-12 activation. Taurodeoxycholic Acid (sodium hydrate) is investigated for use in several conditions such as Primary Biliary Cirrhosis (PBC), insulin resistance, amyloidosis,...

Purity: 98.40%
Clinical Data: No Development Reported
Size: 10mM x 1mL in DMSO, 5 mg, 10 mg

Bioactivity: Taurodeoxycholic acid is one of the main bioactive substances of animals' bile acid.

Purity: 99.80%
Clinical Data: Launched
Size: 10mM x 1mL in DMSO, 5 mg

Bioactivity: Tauroursodeoxycholate Sodium 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: 97.07%
Clinical Data: Launched
Size: 10mM x 1mL in DMSO, 50 mg

Bioactivity: Thevetiaflavone could upregulate the expression of Bcl2 and downregulate that of Bax and caspase3.

Purity: >98%
Clinical Data: No Development Reported
Size: 5 mg
<table>
<thead>
<tr>
<th><strong>Z-DEVD-FMK</strong></th>
<th><strong>Cat. No.: HY-12466</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bioactivity:</strong></td>
<td>Z-DEVD-FMK is a specific and irreversible <strong>caspase-3</strong> inhibitor with IC&lt;sub&gt;50&lt;/sub&gt; of 18 μM.</td>
</tr>
<tr>
<td><strong>Purity:</strong></td>
<td>98.0%</td>
</tr>
<tr>
<td><strong>Clinical Data:</strong></td>
<td>No Development Reported</td>
</tr>
<tr>
<td><strong>Size:</strong></td>
<td>10mM x 1mL in DMSO, 1 mg, 5 mg, 10 mg</td>
</tr>
</tbody>
</table>

| **Z-IETD-FMK** | **(Z-IE(OMe)TD(OMe)-FMK)** | **Cat. No.: HY-101297** |
|----------------|-----------------------------|
| **Bioactivity:** | Z-IETD-FMK is a selective and cell permeable **caspase 8** inhibitor. |
| **Purity:** | 98.0% |
| **Clinical Data:** | No Development Reported |
| **Size:** | 10mM x 1mL in DMSO, 1 mg, 5 mg |

| **Z-VAD(OMe)-FMK** | **(Z-Val-Ala-Asp(OMe)-FMK)** | **Cat. No.: HY-16658** |
|-------------------|--------------------------------|
| **Bioactivity:** | Z-VAD(OMe)-FMK is a cell-permeable and irreversible **pan-caspase** inhibitor. |
| **Purity:** | 98.20% |
| **Clinical Data:** | No Development Reported |
| **Size:** | 10mM x 1mL in DMSO, 1 mg, 5 mg, 10 mg |
DAPK (Death-associated protein kinase) is the founding member of a newly classified family of Ser/Thr kinases, whose members not only possess significant homology in their catalytic domains, but also share cell death-associated functions. The realization that DAPK is a tumor suppressor gene, whose expression is lost in multiple tumor types, has spurred a flurry of interest in the kinase family and produced an impressive body of literature concerning its function, regulation, and connection to disease. The DAPK family has been linked to several cell death-related signaling pathways, and functions other than cell death have also been proposed.
## DAPK Inhibitors & Modulators

<table>
<thead>
<tr>
<th><strong>TC-DAPK 6</strong></th>
<th><strong>Cat. No.: HY-15513</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bioactivity:</strong></td>
<td>TC-DAPK 6 is a potent, ATP-competitive, and highly selective DAPK inhibitor (IC$_{50}$=69 and 225 nM against DAPK1 and DAPK3, respectively, with 10 μM ATP).</td>
</tr>
<tr>
<td><strong>Purity:</strong></td>
<td>95.0%</td>
</tr>
<tr>
<td><strong>Clinical Data:</strong></td>
<td>No Development Reported</td>
</tr>
<tr>
<td><strong>Size:</strong></td>
<td>10mM x 1mL in DMSO, 10 mg, 50 mg</td>
</tr>
</tbody>
</table>
Ferroptosis is a non-apoptotic form of regulated cell death. It is distinct from other regulated cell death phenotypes, such as apoptosis and necroptosis. Ferroptosis is characterized by extensive lipid peroxidation, which can be suppressed by iron chelators or lipophilic antioxidants. Mechanistically, Ferroptosis inducers are divided into two classes: (1) inhibitors of cystine import via system $x_{c}^-$ (e.g., Erastin), which subsequently causes depletion of glutathione (GSH), and (2) covalent inhibitors (e.g., (1S, 3R)-RSL3) of glutathione peroxidase 4 (GPX4). Since GPX4 reduces lipid hydroperoxides using GSH as a co-substrate, both compound classes ultimately result in loss of GPX4 activity, followed by elevated levels of lipid reactive oxygen species (ROS) and consequent cell death.

Ferroptosis is an iron- and ROS-dependent form of regulated cell death (RCD). Misregulated Ferroptosis has been implicated in multiple physiological and pathological processes, including cancer cell death, neurotoxicity, neurodegenerative diseases, acute renal failure, drug-induced hepatotoxicity, hepatic and heart ischemia/reperfusion injury, and T-cell immunity.
# Ferroptosis Inhibitors & Modulators

## CIL56
**Cat. No.**: HY-112063

**Bioactivity**: CIL56 is a potent and selective ferroptosis inducer. Ferroptosis is an iron-dependent form of regulated cell death (RCD).

**Purity**: >98%

**Clinical Data**: No Development Reported

**Size**: 10mM x 1mL in DMSO, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

---

## Erastin
**Cat. No.**: HY-15763

**Bioactivity**: Erastin is a ferroptosis activator.

**Purity**: 99.42%

**Clinical Data**: No Development Reported

**Size**: 10mM x 1mL in DMSO, 5 mg, 10 mg, 50 mg, 100 mg, 200 mg

---

## Ferrostatin-1
**Cat. No.**: HY-100579

**Bioactivity**: Ferrostatin-1 is a potent inhibitor of ferroptosis with an EC$_{50}$ of 60 nM.

**Purity**: 99.72%

**Clinical Data**: No Development Reported

**Size**: 10mM x 1mL in DMSO, 5 mg, 10 mg, 25 mg, 50 mg

---

## FIN56
**Cat. No.**: HY-103087

**Bioactivity**: FIN56 is a specific inducer of ferroptosis.

**Purity**: 98.03%

**Clinical Data**: No Development Reported

**Size**: 10mM x 1mL in DMSO, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

---

## Imidazole ketone erastin (IKE)
**Cat. No.**: HY-114481

**Bioactivity**: Imidazole ketone erastin (IKE) is a potent, selective, and metabolically stable inhibitor of the cystine-glutamate antiporter, system X$_c^-$, and an activator of ferroptosis.

**Purity**: 98.09%

**Clinical Data**: No Development Reported

**Size**: 10mM x 1mL in DMSO, 5 mg, 10 mg, 25 mg, 50 mg

---

## Liproxstatin-1
**Cat. No.**: HY-12726

**Bioactivity**: Liproxstatin-1 is a potent ferroptosis inhibitor, with IC$_{50}$ of approximately 38 nM.

**Purity**: 98.38%

**Clinical Data**: No Development Reported

**Size**: 10mM x 1mL in DMSO, 5 mg, 10 mg, 50 mg, 100 mg

---

## UAMC-3203
**Cat. No.**: HY-112909

**Bioactivity**: UAMC-3203 is a potent and selective Ferroptosis inhibitor with an IC$_{50}$ of 12 nM.

**Purity**: >98%

**Clinical Data**: No Development Reported

**Size**: 500 mg, 250 mg

---

## UAMC-3203 hydrochloride
**Cat. No.**: HY-112909A

**Bioactivity**: UAMC-3203 hydrochloride is a potent and selective Ferroptosis inhibitor with an IC$_{50}$ of 12 nM.[1]

**Purity**: >98%

**Clinical Data**: No Development Reported

**Size**: 10mM x 1mL in DMSO, 5 mg, 10 mg, 50 mg, 100 mg

[1] Tel: 609-228-6898  Fax: 609-228-5909  Email: sales@MedChemExpress.com
FKBP
FK506-binding protein

HDAC Inhibitor:
Vorinostat (SAHA)

HDAC (Histone deacetylase)
### FKBP Inhibitors & Modulators

**AP1867**
Cat. No.: HY-114434

**Bioactivity:**
AP1867 is a synthetic FKBP12 
F38V-directed ligand.

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

**Everolimus**
(RAD001; SDZ-RAD)
Cat. No.: HY-10218

**Bioactivity:**
Everolimus (RAD001) is a potent mTOR inhibitor that binds to FKBP-12 to generate an immunosuppressive complex.

**Purity:** 98.79%
**Clinical Data:** Launched
**Size:** 5 mg, 10 mg, 50 mg, 100 mg

**Rapamycin**
(Sirolimus; AY 22989)
Cat. No.: HY-10219

**Bioactivity:**
Rapamycin (Sirolimus; AY 22989) is a potent and specific mTOR inhibitor with an IC_{50} of 0.1 nM in HEK293 cells. Rapamycin binds to FKBP12 and specifically acts as an allosteric inhibitor of mTORC1 [1]. Rapamycin is...

**Purity:** 99.93%
**Clinical Data:** Launched
**Size:** 50 mg, 100 mg, 200 mg, 500 mg, 1 g, 2 g, 5 g

**SAFit1**
Cat. No.: HY-102079

**Bioactivity:**
SAFit1 is a FK506 binding protein 51 (FKBPs1)-specific inhibitor with a K_i of 4±0.3 nM [1] [2].

**Purity:** > 98%
**Clinical Data:** No Development Reported
**Size:** 5 mg, 10 mg, 25 mg, 50 mg

**Rimuducid**
(API1903)
Cat. No.: HY-16046

**Bioactivity:**
Rimuducid (API1903) is a dimerizer agent that acts by cross-linking the FKBP domains, initiating Fas signaling and hence apoptosis.

**Purity:** 99.81%
**Clinical Data:** Phase 2
**Size:** 10mM x 1mL in DMSO,
2 mg, 5 mg, 10 mg, 50 mg, 100 mg

**SAFit2**
Cat. No.: HY-102080

**Bioactivity:**
SAFit2 is a novel, selective FK506-binding protein 51 (FKBPs1) antagonist with a K_i of 6 nM and also enhances AKT2-AS160 binding.

**Purity:** 98.59%
**Clinical Data:** No Development Reported
**Size:** 10mM x 1mL in DMSO,
5 mg

**Tacrolimus**
(FK506; Fujimycin; FR900506)
Cat. No.: HY-13756

**Bioactivity:**
Tacrolimus (FK506; Fujimycin) is a macrocyclic lactone with potent immunosuppressive properties. Tacrolimus binds to FK506 binding protein (FKBP) to form a complex and inhibits calcineurin phosphatase.

**Purity:** 98.46%
**Clinical Data:** Launched
**Size:** 10 mg, 50 mg, 100 mg, 200 mg, 500 mg

**Tacrolimus monohydrate**
(FK506 monohydrate; Fujimycin monohydrate; FR900506 monohydrate)
Cat. No.: HY-13756A

**Bioactivity:**
Tacrolimus monohydrate (FK506 monohydrate; Fujimycin monohydrate) binds to FK506 binding protein (FKBP). This complex inhibits calcineurin phosphatase (PP2B). Tacrolimus monohydrate is a mTOR-independent autophagy inducer.

**Purity:** 98.46%
**Clinical Data:** Launched
**Size:** 10mM x 1mL in DMSO,
5 mg, 10 mg, 50 mg

---

**Bioactivity:**
AP20187 (B/B Homodimerizer)
Cat. No.: HY-13992

**Bioactivity:**
AP20187 (B/B Homodimerizer) is a cell-permeable ligand used to dimerize FK506-binding protein (FKBP) fusion proteins and initiate biological signaling cascades and gene expression or disrupt protein-protein interactions.

**Purity:** 99.80%
**Clinical Data:** No Development Reported
**Size:** 500 mg, 250 mg

---

**Bioactivity:**
PROTAC FKBP12-binding moiety 1
Cat. No.: HY-107452

**Bioactivity:**
PROTAC FKBP12-binding moiety 1 is a synthetic ligand for FKBP (SLF), which is used in the synthesis of PROTACs.

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

---

**Bioactivity:**
Everolimus (RAD001; SDZ-RAD)
Cat. No.: HY-10218

**Bioactivity:**
Everolimus (RAD001) is a potent mTOR inhibitor that binds to FKBP-12 to generate an immunosuppressive complex.

**Purity:** 98.79%
**Clinical Data:** Launched
**Size:** 5 mg, 10 mg, 50 mg, 100 mg

---

**Bioactivity:**
Rapamycin (Sirolimus; AY 22989)
Cat. No.: HY-10219

**Bioactivity:**
Rapamycin (Sirolimus; AY 22989) is a potent and specific mTOR inhibitor with an IC_{50} of 0.1 nM in HEK293 cells. Rapamycin binds to FKBP12 and specifically acts as an allosteric inhibitor of mTORC1 [1]. Rapamycin is...

**Purity:** 99.93%
**Clinical Data:** Launched
**Size:** 50 mg, 100 mg, 200 mg, 500 mg, 1 g, 2 g, 5 g

---

**Bioactivity:**
SAFit1 is a FK506 binding protein 51 (FKBPs1)-specific inhibitor with a K_i of 4±0.3 nM [1] [2].

**Purity:** > 98%
**Clinical Data:** No Development Reported
**Size:** 5 mg, 10 mg, 25 mg, 50 mg

---

**Bioactivity:**
SAFit2 is a novel, selective FK506-binding protein 51 (FKBPs1) antagonist with a K_i of 6 nM and also enhances AKT2-AS160 binding.

**Purity:** 98.59%
**Clinical Data:** No Development Reported
**Size:** 10mM x 1mL in DMSO,
5 mg

---

**Bioactivity:**
Tacrolimus (FK506; Fujimycin; FR900506)
Cat. No.: HY-13756

**Bioactivity:**
Tacrolimus (FK506; Fujimycin) is a macrocyclic lactone with potent immunosuppressive properties. Tacrolimus binds to FK506 binding protein (FKBP) to form a complex and inhibits calcineurin phosphatase.

**Purity:** 98.46%
**Clinical Data:** Launched
**Size:** 10 mg, 50 mg, 100 mg, 200 mg, 500 mg

---

**Bioactivity:**
Tacrolimus monohydrate (FK506 monohydrate; Fujimycin monohydrate; FR900506 monohydrate)
Cat. No.: HY-13756A

**Bioactivity:**
Tacrolimus monohydrate (FK506 monohydrate; Fujimycin monohydrate) binds to FK506 binding protein (FKBP). This complex inhibits calcineurin phosphatase (PP2B). Tacrolimus monohydrate is a mTOR-independent autophagy inducer.

**Purity:** 98.46%
**Clinical Data:** Launched
**Size:** 10mM x 1mL in DMSO,
5 mg, 10 mg, 50 mg
IAP (Inhibitors of Apoptosis) is a family of functionally and structurally related proteins, which serve as endogenous inhibitors of programmed cell death (apoptosis). A common feature of all IAPs is the presence of a BIR in one to three copies. The human IAP family consists of 8 members, and IAP homologs have been identified in numerous organisms. The members of the IAPs included IAPs, Cp-IAP, Op-IAP, XIAP, c-IAP1, C-IAP2, NAIP, Livin and Survivin. The best characterized IAP is XIAP, which binds caspase-9, caspase-3 and caspase 7, thereby inhibiting their activation and preventing apoptosis. Also cIAP1 and cIAP2 have been shown to bind caspases, although how the IAPs inhibit apoptosis mechanistically at the molecular level is not completely understood.
IAP Inhibitors & Modulators

**ASTX660**
Cat. No.: HY-109565

**Bioactivity:** ASTX660 is an orally bioavailable dual antagonist of cellular inhibitor of apoptosis protein (cIAP) and X-linked inhibitor of apoptosis protein (XIAP).

**Purity:** 98.79%
**Clinical Data:** Phase 2
**Size:** 10mM x 1mL in DMSO, 1 mg, 5 mg, 10 mg, 25 mg

**AZD5582**
Cat. No.: HY-12600

**Bioactivity:** AZD5582 is an IAP antagonist which binds potently to the BIR3 domains of cIAP1, cIAP2, and XIAP with IC\text{50}s of 15, 21, and 15 nM, respectively.

**Purity:** 98.13%
**Clinical Data:** No Development Reported
**Size:** 10mM x 1mL in DMSO, 5 mg, 10 mg, 50 mg

**Biarinapant**
(TL32711)
Cat. No.: HY-16591

**Bioactivity:** Biarinapant, a bivalent Smac mimic, is a potent antagonist for XIAP and cIAP1 with K\text{d}s of 45 nM and less than 1 nM, respectively.

**Purity:** 99.36%
**Clinical Data:** Phase 2
**Size:** 10mM x 1mL in DMSO, 5 mg, 10 mg, 50 mg, 100 mg

**BV6**
Cat. No.: HY-16701

**Bioactivity:** BV6 is an antagonist of cIAP1 and XIAP, members of the inhibitors of apoptosis (IAP) family.

**Purity:** 99.25%
**Clinical Data:** No Development Reported
**Size:** 10mM x 1mL in DMSO, 5 mg, 10 mg, 50 mg, 100 mg

**CUDC-427**
(GDC-0917)
Cat. No.: HY-15835

**Bioactivity:** CUDC-427 is a potent second-generation pan-selective IAP antagonist, used for treatment of various cancers.

**Purity:** 99.70%
**Clinical Data:** Phase 1
**Size:** 10mM x 1mL in DMSO, 10 mg, 50 mg

**Embelin**
(Embelic acid; Emberine; NSC 91874)
Cat. No.: HY-17473

**Bioactivity:** Embelin is a cell-permeable benzoquinone compound that exhibits antitumor properties. Specifically antagonizes XIAP-mediated inhibition of caspase-9 activation by directly targeting the Smac and caspase-9 binding domain BIR3 (IC50 = 4.1 uM in a competitive binding assay with Smac peptide).

**Purity:** 98.75%
**Clinical Data:** Launched
**Size:** 10mM x 1mL in DMSO, 10 mg, 50 mg

**GDC-0152**
Cat. No.: HY-13638

**Bioactivity:** GDC-0152 is a potent inhibitor of IAPs which binds to the XIAP BIR3 domain, the BIR domain of ML-IAP, and the BIR3 domains of cIAP1 and cIAP2 with K\text{d} values of 28, 14, 17, and 43 nM, respectively.

**Purity:** 98.73%
**Clinical Data:** Phase 1
**Size:** 10mM x 1mL in DMSO, 10 mg, 50 mg

**LCL161**
Cat. No.: HY-15518

**Bioactivity:** LCL161 is an IAP inhibitor which inhibits XIAP in HEK293 cell and cIAP1 in MDA-MB-231 cell with IC\text{50}s of 35 and 0.4 nM, respectively.

**Purity:** 99.17%
**Clinical Data:** Phase 2
**Size:** 10mM x 1mL in DMSO, 5 mg, 10 mg, 50 mg, 100 mg

**MV1**
Cat. No.: HY-113534

**Bioactivity:** MV1 is an antagonist of IAP (inhibitor of apoptosis protein), leads to protein knockdown of HaloTag-fused proteins when combined with HaloTag ligand.[1]

**Purity:** >98%
**Clinical Data:** No Development Reported
**Size:** 10mM x 1mL in DMSO, 5 mg, 10 mg, 50 mg, 100 mg

**MX69**
Cat. No.: HY-100892

**Bioactivity:** MX69 is an inhibitor of MDM2/XIAP, used for cancer treatment.

**Purity:** 98.59%
**Clinical Data:** No Development Reported
**Size:** 10mM x 1mL in DMSO, 1 mg, 5 mg, 10 mg, 50 mg, 100 mg
<table>
<thead>
<tr>
<th>Compound</th>
<th>Cat. No.</th>
<th>Bioactivity</th>
<th>Purity</th>
<th>Clinical Data</th>
<th>Size</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SM-164</strong></td>
<td>HY-15989</td>
<td>SM-164 is a cell-permeable Smac mimetic compound. SM-164 binds to XIAP protein containing both the BIR2 and BIR3 domains with an IC$_{50}$ value of 1.39 nM and functions as an extremely potent antagonist of XIAP.</td>
<td>99.38%</td>
<td>No Development Reported</td>
<td>5 mg, 10 mg, 50 mg, 100 mg</td>
</tr>
<tr>
<td><strong>SM-164 Hydrochloride</strong></td>
<td>HY-15989A</td>
<td>SM-164 Hydrochloride is a cell-permeable Smac mimetic compound. SM-164 binds to XIAP protein containing both the BIR2 and BIR3 domains with an IC$_{50}$ value of 1.39 nM and functions as an extremely potent antagonist of XIAP.</td>
<td>98.84%</td>
<td>No Development Reported</td>
<td>10mM x 1mL in Water, 5 mg, 10 mg, 50 mg</td>
</tr>
<tr>
<td><strong>UC-112</strong></td>
<td>HY-12842</td>
<td>UC-112 is a novel potent IAP (Inhibitor of apoptosis) inhibitor; potently inhibit cell growth in two human melanoma (A375 and M14) and two human prostate (PC-3 and DU145) cancer cell lines (IC$_{50}$=0.7-3.4 μM).</td>
<td>95.0%</td>
<td>No Development Reported</td>
<td>10 mg, 50 mg</td>
</tr>
</tbody>
</table>
The p53 tumor suppressor is a principal mediator of growth arrest, senescence, and apoptosis in response to a broad array of cellular damage. p53 is a short-lived protein that is maintained at low, often undetectable, levels in normal cells. Under stress conditions, the p53 protein accumulates in the cell, binds in its tetrameric form to p53-response elements and induces the transcription of various genes.

MDM-2 is transcriptionally activated by p53 and MDM-2, in turn, inhibits p53 activity in several ways. MDM-2 binds to the p53 transactivation domain and thereby inhibits p53-mediated transactivation. MDM-2 also contains a signal sequence that is similar to the nuclear export signal of various viral proteins and, after binding to p53, it induces its nuclear export. As p53 is a transcription factor, it needs to be in the nucleus to be able to access the DNA; its transport to the cytoplasm by MDM-2 prevents this. Finally, MDM-2 is a ubiquitin ligase, so is able to target p53 for degradation by the proteasome.

In many tumors p53 is inactivated by the overexpression of the negative regulators MDM2 and MDM4 or by the loss of activity of the MDM2 inhibitor ARF. The pathway can be reactivated in these tumors by small molecules that inhibit the interaction of MDM2 and/or MDM4 with p53. Such molecules are now in clinical trials.
# MDM-2/p53 Inhibitors & Modulators

## AM-8735
**Cat. No.:** HY-12734
### Bioactivity:
AM-8735 is a potent and selective MDM2 inhibitor with an IC\(_{50}\) of 25 nM.

### Purity:
>98%

### Clinical Data:
No Development Reported

### Size:
250 mg, 500 mg

## AMG 232
**Cat. No.:** HY-12296
### Bioactivity:
AMG 232 is a potent, selective and orally available inhibitor of p53-MDM2 interaction, with an IC\(_{50}\) of 0.6 nM. AMG 232 binds to MDM2 with a K\(_d\) of 0.045 nM.

### Purity:
99.90%

### Clinical Data:
Phase 2

### Size:
5 mg, 10 mg, 50 mg, 100 mg

## BH3I-1 (BH11, BH 311)
**Cat. No.:** HY-100383
### Bioactivity:
BH3I-1 is a Bcl-2 family antagonist, which inhibits the binding of the Bak BH3 peptide to Bcl-xL with a K\(_d\) of 2.4±0.2 μM in FP assay. BH3I-1 has a K\(_d\) of 5.3 μM against the p53/MDM2 pair.

### Purity:
98.0%

### Clinical Data:
No Development Reported

### Size:
10mM x 1mL in DMSO, 2 mg, 5 mg, 10 mg, 25 mg, 50 mg

## CBL0137 hydrochloride (Curaxin-137 hydrochloride; CBL-C137 hydrochloride)
**Cat. No.:** HY-18935A
### Bioactivity:
CBL0137 hydrochloride is an inhibitor of the histone chaperone. FACT. CBL0137 hydrochloride can also activate p53 and inhibits NF-κB with EC\(_{50}\) of 0.37 and 0.47 μM, respectively.

### Purity:
98.25%

### Clinical Data:
No Development Reported

### Size:
10mM x 1mL in DMSO, 2 mg, 5 mg, 10 mg, 25 mg, 50 mg

## COTI-2
**Cat. No.:** HY-19896
### Bioactivity:
COTI-2 is a small molecule candidate anti-cancer drug which can convert mutant p53 to wild-type conformation.

### Purity:
99.40%

### Clinical Data:
No Development Reported

### Size:
10mM x 1mL in DMSO, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

## CTX1
**Cat. No.:** HY-U00442
### Bioactivity:
CTX1 is a novel small molecule p53 activator.

### Purity:
96.0%

### Clinical Data:
No Development Reported

### Size:
10mM x 1mL in DMSO, 5 mg, 10 mg, 25 mg

## DPBQ
**Cat. No.:** HY-U00441
### Bioactivity:
DPBQ is a p53 activator.

### Purity:
>98%

### Clinical Data:
No Development Reported

### Size:
5 mg, 10 mg, 25 mg

## Idasanutlin (RG7388)
**Cat. No.:** HY-15676
### Bioactivity:
Idasanutlin (RG7388) is a potent and selective MDM2 antagonist, inhibiting p53-MDM2 binding, with an IC\(_{50}\) of 6 nM.

### Purity:
99.97%

### Clinical Data:
Phase 3

### Size:
10mM x 1mL in DMSO, 5 mg, 10 mg, 50 mg, 100 mg

## Inauhzin (INZ)
**Cat. No.:** HY-15869
### Bioactivity:
Inauhzin is a dual SirT1/IMPDH2 inhibitor, and acts as an activator p53, used in the research of cancer.

### Purity:
98.91%

### Clinical Data:
No Development Reported

### Size:
10mM x 1mL in DMSO, 5 mg, 10 mg, 50 mg, 100 mg

## Kevetrin hydrochloride (4-Isothioureaibutyronitrile hydrochloride;...)
**Cat. No.:** HY-16271
### Bioactivity:
Kevetrin hydrochloride is a small molecule and activator of the tumor suppressor protein p53, with potential antineoplastic activity. Targetedp53 in vitro: Kevetrin activates p53 which in turn induces the expressions of p21 and PUMA (p53 up-regulated modulator of apoptosis), thereby...

### Purity:
98.0%

### Clinical Data:
Phase 2

### Size:
10mM x 1mL in DMSO, 10 mg, 50 mg, 100 mg
MA242
Cat. No.: HY-112816

**Bioactivity:**
MA242 is a dual inhibitor of murine double minute 2 (MDM2) and nuclear factor of activated T cells 1 (NFAT1) for Pancreatic Cancer Therapy \[^{[1]}\].

**Purity:**
96.32%

**Clinical Data:**
No Development Reported

**Size:**
250 mg, 100 mg, 500 mg

---

MDMX/MDM2-IN-1
Cat. No.: HY-112283

**Bioactivity:**
MDMX/MDM2-IN-1 is a stapled peptide that blocks interactions between p53 and both MDM2 and MDMX.

**Purity:**
>98%

**Clinical Data:**
No Development Reported

**Size:**
250 mg, 100 mg, 500 mg

---

MI-773
Cat. No.: HY-17493

**Bioactivity:**
MI-773 is a new small molecule inhibitor of the MDM2-p53 interaction, binds to MDM2 with high affinity (K\(_i\)=0.88 nM) and blocks the p53-MDM2 interaction.

**Purity:**
>98%

**Clinical Data:**
No Development Reported

**Size:**
10mM x 1mL in DMSO, 5 mg, 10 mg, 50 mg, 100 mg

---

Milademetan (DS-3032)
Cat. No.: HY-101266

**Bioactivity:**
Milademetan is a specific MDM2 inhibitor, a pharmaceutical composition for use in treating acute myeloid leukemia (AML).

**Purity:**
92.38%

**Clinical Data:**
No Development Reported

**Size:**
10mM x 1mL in DMSO, 1 mg, 5 mg, 10 mg

---

MX69
Cat. No.: HY-100892

**Bioactivity:**
MX69 is an inhibitor of MDM2/XIAP, used for cancer treatment.

**Purity:**
98.59%

**Clinical Data:**
No Development Reported

**Size:**
10mM x 1mL in DMSO, 1 mg, 5 mg, 10 mg, 50 mg, 100 mg

---

NSC319726 (ZMC1)
Cat. No.: HY-18634

**Bioactivity:**
NSC319726 (ZMC1) is a mutant p53R175 reactivator; inhibits growth of fibroblasts expressing the p53R175 mutation (IC50 = 8 nM); shows no inhibition for p53 wild-type cells.

**Purity:**
99.39%

**Clinical Data:**
No Development Reported

**Size:**
10mM x 1mL in DMSO, 5 mg, 10 mg, 50 mg

---

NSC59984
Cat. No.: HY-19726

**Bioactivity:**
NSC59984 induces mutant p53 protein degradation via MDM2 and the ubiquitin-proteasome pathway. The EC50 of NSC59984 in most cancer cells is significantly lower than those of normal cells, with EC50 of 8.38 μM for p53-null HCT116 cells. IC50 value: 8.38 μM (EC50 for p53-null HCT116 cells) Target: p53...

**Purity:**
99.84%

**Clinical Data:**
No Development Reported

**Size:**
10mM x 1mL in DMSO, 5 mg, 10 mg, 50 mg, 100 mg

---

Nutlin 3
Cat. No.: HY-50696

**Bioactivity:**
Nutlin 3 is a commercial available p53-MDM2 inhibitor, with K\(_i\) of 90 nM.

**Purity:**
98.32%

**Clinical Data:**
No Development Reported

**Size:**
10mM x 1mL in DMSO, 5 mg, 10 mg, 50 mg, 100 mg

---

Nutlin 3a (Nutlin-3a chiral)
Cat. No.: HY-10029

**Bioactivity:**
Nutlin 3a is an active enantiomer of Nutlin-3, acts as a murine double minute (MDM2) antagonist that inhibits MDM2-p53 interactions and stabilizes the p53 protein, and thereby induces cell cycle arrest and apoptosis.

**Purity:**
98.11%

**Clinical Data:**
No Development Reported

**Size:**
10mM x 1mL in DMSO, 5 mg, 10 mg, 50 mg

---

Nutlin 3b (Nutlin-3b)
Cat. No.: HY-15335

**Bioactivity:**
Nutlin 3b is a p53/MDM2 inhibitor with an IC\(_{50}\) of 13.6 μM. Nutlin-3b is 150 times less potent in binding to MDM2 than Nutlin-3a \[^{[2]}\].

**Purity:**
96.32%

**Clinical Data:**
No Development Reported

**Size:**
10mM x 1mL in DMSO, 5 mg, 10 mg, 50 mg
<table>
<thead>
<tr>
<th>Bioactivity</th>
<th>Purity</th>
<th>Clinical Data</th>
<th>Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>NVP-CGM097 is a potent and selective MDM2 inhibitor with $IC_{50}$ of 1.7±0.1 nM for hMDM2.</td>
<td>98.32%</td>
<td>Phase 1</td>
<td>10mM x 1mL in DMSO, 2 mg, 5 mg, 10 mg, 50 mg, 100 mg</td>
</tr>
<tr>
<td>NVP-CGM097 sulfate is a potent and selective MDM2 inhibitor with $IC_{50}$ of 1.7±0.1 nM for hMDM2.</td>
<td>98.83%</td>
<td>Phase 1</td>
<td>10mM x 1mL in Water, 2 mg, 5 mg, 10 mg, 50 mg, 100 mg</td>
</tr>
<tr>
<td>p53 and MDM2 proteins-interaction-inhibitor chiral</td>
<td>97.77%</td>
<td>No Development Reported</td>
<td>10mM x 1mL in DMSO, 10 mg, 100 mg</td>
</tr>
<tr>
<td>p53 and MDM2 proteins-interaction-inhibitor dihydrochloride</td>
<td>99.79%</td>
<td>No Development Reported</td>
<td>10mM x 1mL in DMSO, 10 mg, 100 mg</td>
</tr>
<tr>
<td>p53 and MDM2 proteins-interaction-inhibitor racemic</td>
<td>&gt;98%</td>
<td>No Development Reported</td>
<td>10 mg, 100 mg</td>
</tr>
<tr>
<td>PhiKan 083 is a carbazole derivative, which binds to the surface cavity and stabilizes Y220C (a p53 mutant), with a $K_d$ of 167 μM [1], and a relative binding affinity ($K_d$) of 150 μM in Ln229 cells [3].</td>
<td>99.0%</td>
<td>No Development Reported</td>
<td>10mM x 1mL in DMSO, 5 mg, 10 mg, 25 mg</td>
</tr>
<tr>
<td>Pifithrin-α hydrobromide is a p53 inhibitor which blocks its transcriptional activity and prevents cells from apoptosis. Pifithrin-α hydrobromide is also an aryl hydrocarbon receptor (AhR) agonist.</td>
<td>98.28%</td>
<td>No Development Reported</td>
<td>10mM x 1mL in DMSO, 5 mg, 10 mg, 25 mg, 50 mg</td>
</tr>
<tr>
<td>Pifithrin-β is a potent p53 inhibitor with an $IC_{50}$ of 23 μM.</td>
<td>&gt;98%</td>
<td>No Development Reported</td>
<td>5 mg, 10 mg, 50 mg</td>
</tr>
<tr>
<td>Purity:</td>
<td>Clinical Data:</td>
<td>Size:</td>
<td></td>
</tr>
<tr>
<td>--------</td>
<td>----------------</td>
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<td></td>
</tr>
<tr>
<td>95.14%</td>
<td>No Development Reported</td>
<td>10mM x 1mL in DMSO, 10 mg</td>
<td></td>
</tr>
</tbody>
</table>

Bioactivity: Pifithrin-μ is an inhibitor of p53 and HSP70, with antitumor and neuroprotective activity.

<table>
<thead>
<tr>
<th>PK11007</th>
<th>Cat. No.: HY-U00447</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purity:</td>
<td>99.74%</td>
</tr>
<tr>
<td>Clinical Data:</td>
<td>No Development Reported</td>
</tr>
<tr>
<td>Size:</td>
<td>10mM x 1mL in DMSO, 5 mg, 10 mg, 25 mg</td>
</tr>
</tbody>
</table>

Bioactivity: PK11007 is a p53 targeting compound, has anti-tumor activities through activation of unstable p53.

<table>
<thead>
<tr>
<th>PRIMA-1</th>
<th>(NSC-281668)</th>
<th>Cat. No.: HY-19980A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purity:</td>
<td>98.0%</td>
<td></td>
</tr>
<tr>
<td>Clinical Data:</td>
<td>No Development Reported</td>
<td></td>
</tr>
<tr>
<td>Size:</td>
<td>10mM x 1mL in DMSO, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg, 200 mg</td>
<td></td>
</tr>
</tbody>
</table>

Bioactivity: PRIMA-1 (NSC-281668) is a mutant p53 reactivator, restores the sensitivity of TP53 mutant-type thyroid cancer cells to the histone methylation inhibitor 3-Deazaneplanocin A.

<table>
<thead>
<tr>
<th>PRIMA-1Met</th>
<th>(APR-246)</th>
<th>Cat. No.: HY-19980</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purity:</td>
<td>99.0%</td>
<td></td>
</tr>
<tr>
<td>Clinical Data:</td>
<td>No Development Reported</td>
<td></td>
</tr>
<tr>
<td>Size:</td>
<td>10mM x 1mL in Water, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg</td>
<td></td>
</tr>
</tbody>
</table>

Bioactivity: PRIMA-1MET restores wild-type conformation and function to mutant p53, and triggers apoptosis in tumor cells. PRIMA-1MET also targets the selenoprotein thioredoxin reductase 1 (TrxR1), a key regulator of cellular redox balance.

<table>
<thead>
<tr>
<th>ReACp53</th>
<th>Cat. No.: HY-P0121</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purity:</td>
<td>99.65%</td>
</tr>
<tr>
<td>Clinical Data:</td>
<td>No Development Reported</td>
</tr>
<tr>
<td>Size:</td>
<td>1 mg, 5 mg, 10 mg, 25 mg, 50 mg</td>
</tr>
</tbody>
</table>

Bioactivity: ReACp53 could inhibit p53 amyloid formation and rescue p53 function in cancer cell lines.

<table>
<thead>
<tr>
<th>RG7112</th>
<th>(RO5045337)</th>
<th>Cat. No.: HY-10959</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purity:</td>
<td>99.91%</td>
<td></td>
</tr>
<tr>
<td>Clinical Data:</td>
<td>Phase 1</td>
<td></td>
</tr>
<tr>
<td>Size:</td>
<td>10mM x 1mL in DMSO, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg</td>
<td></td>
</tr>
</tbody>
</table>

Bioactivity: RG7112 is the first clinical and orally available MDM-2/p53 inhibitor designed to occupy the p53-binding pocket of MDM2, with the $K_d$ value of 11 nM.

<table>
<thead>
<tr>
<th>RO-5963</th>
<th>Cat. No.: HY-120086</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purity:</td>
<td>&gt;98%</td>
</tr>
<tr>
<td>Clinical Data:</td>
<td>No Development Reported</td>
</tr>
<tr>
<td>Size:</td>
<td>100 mg, 250 mg, 500 mg</td>
</tr>
</tbody>
</table>

Bioactivity: RO-5963 is a dual p53-MDM2 and p53-MDMX inhibitor with $IC_{50}$ of ~17 nM and ~24 nM, respectively. [1]

<table>
<thead>
<tr>
<th>SAR405838</th>
<th>(MI-77301)</th>
<th>Cat. No.: HY-18986</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purity:</td>
<td>95.14%</td>
<td></td>
</tr>
<tr>
<td>Clinical Data:</td>
<td>Phase 1</td>
<td></td>
</tr>
<tr>
<td>Size:</td>
<td>10mM x 1mL in DMSO, 5 mg, 10 mg, 50 mg, 100 mg</td>
<td></td>
</tr>
</tbody>
</table>

Bioactivity: SAR405838 is a highly potent and selective MDM2 inhibitor, binds to MDM2 with $K_i = 0.88$ nM and has high specificity over other proteins. IC50 value: 0.88 nM (Ki) [1] Target: MDM2 in vitro; SAR405838 potently inhibits cell growth in cancer cell lines, including SJSA-1 (IC50, 0.092 μM), RS4;11 (IC50, 0.089...
| **Serdemetan**  
**JNJ-26854165)** | **Bioactivity:** Serdemetan(JNJ-26854165) acts as an HDM2 ubiquitin ligase antagonist and also induces early apoptosis in p53 wild-type cells, inhibits cellular proliferation followed by delayed apoptosis in the absence of functional p53. IC50 value: HDM2 ubiquitin ligase Target: in vitro: JNJ 26854165 is a novel... | **Cat. No.: HY-12025** |
| **Purity:** 98.32%  
**Clinical Data:** Phase 1  
**Size:** 10mM x 1mL in DMSO, 10 mg, 50 mg, 100 mg |

| **Siremadlin**  
**(NVP-HDM201; HDM201)** | **Bioactivity:** Siremadlin (NVP-HDM201) is a potent and highly specific MDM-2/p53 inhibitor. | **Cat. No.: HY-18658** |
| **Purity:** 99.19%  
**Clinical Data:** No Development Reported  
**Size:** 10mM x 1mL in DMSO, 1 mg, 5 mg, 10 mg, 50 mg, 100 mg |

| **SJ-172550**  
**Cat. No.: HY-16664** | **Bioactivity:** SJ-172550 is a small molecule inhibitor of MDMX, competes for the wild type p53 peptide binding to MDMX with an EC50 of 5 μM. | **Bioactivity:** Solasodine(Purapuridine; Solancarpidine; Solasodin) is a poisonous alkaloid chemical compound that occurs in plants of the Solanaceae family. Solasodine showed selective cytotoxicity against cervical cancer cell line (HeLa) and human myeloid leukemia cell line (U937). IC50 Value: 12.17 ± 3.3 uM (HeLa cell line)[1] Target:... | **Cat. No.: HY-N0068** |
| **Purity:** 98.0%  
**Clinical Data:** No Development Reported  
**Size:** 10mM x 1mL in DMSO, 10 mg, 50 mg |

| **Tenovin-1**  
**Cat. No.: HY-13423** | **Bioactivity:** Tenovin-1 is an inhibitor of sirtuin 1 and sirtuin 2, an activator of p53 and may have potential in the management of cancer. | **Bioactivity:** Tenovin-3 is able to increase p53 levels, determined in MCF-7 cells treated for 6 hr at 10 μM. Target: p53 in vitro: Tenovins inhibit the activities of human SirT1 and SirT2, two members of the NAD+-dependent class III histone deacetylases that also belong to the sirtuin family.[1] | **Cat. No.: HY-19339** |
| **Purity:** 99.39%  
**Clinical Data:** No Development Reported  
**Size:** 10mM x 1mL in DMSO, 10 mg, 50 mg |

| **Tenovin-6**  
**Cat. No.: HY-15510** | **Bioactivity:** Tenovin-6 is an inhibitor of SIRT1 and SIRT2, slightly inhibits HDAC8, and is also a potent activator of p53, with IC50 of 21 μM, 10 μM, and 67 μM for SirT1, SirT2, and SirT3, respectively. | **Bioactivity:** Tenovin-6 Hydrochloride is an inhibitor of SIRT1 and SIRT2, slightly inhibits HDAC8, and is also a potent activator of p53, with IC50 of 21 μM, 10 μM, and 67 μM for SirT1, SirT2, and SirT3, respectively. | **Cat. No.: HY-15510B** |
| **Purity:** 98.24%  
**Clinical Data:** No Development Reported  
**Size:** 10mM x 1mL in DMSO, 2 mg, 5 mg, 10 mg, 50 mg, 100 mg |

| **Tenovin-6 Hydrochloride**  
**Cat. No.: HY-15510B** | **Bioactivity:** Tenovin-6 Hydrochloride is an inhibitor of SIRT1 and SIRT2, slightly inhibits HDAC8, and is also a potent activator of p53, with IC50 of 21 μM, 10 μM, and 67 μM for SirT1, SirT2, and SirT3, respectively. | **Bioactivity:** Tenovin-6 Hydrochloride can protect normal tissues from the toxic effects of certain cancer drugs and activate p53 through a JNK-dependent signaling pathway. | **Cat. No.: HY-103640** |
| **Purity:** 98.0%  
**Clinical Data:** No Development Reported  
**Size:** 10mM x 1mL in DMSO, 5 mg, 10 mg |

| **WR-1065 dihydrochloride**  
**Cat. No.: HY-103640** | **Bioactivity:** WR-1065 dihydrochloride can protect normal tissues from the toxic effects of certain cancer drugs and activate p53 through a JNK-dependent signaling pathway. | **Bioactivity:** WR-1065 dihydrochloride can protect normal tissues from the toxic effects of certain cancer drugs and activate p53 through a JNK-dependent signaling pathway. | **Cat. No.: HY-12287** |
| **Purity:** 98.0%  
**Clinical Data:** No Development Reported  
**Size:** 10mM x 1mL in DMSO, 5 mg, 10 mg |

| **YH239-EE**  
**Cat. No.: HY-12287** | **Bioactivity:** YH239-EE, ethyl ester of the free carboxylic acid compound YH239, is a potent p53-MDM2 antagonizing and apoptosis-inducing agent IC50 value: Target: MDM2/p53 YH239-EE inhibits the growth of OCI-AML-3 cells with wild type p53 by inhibiting the p53-MDM2 interaction. YH239-EE induces cell... | **Bioactivity:** YH239-EE, ethyl ester of the free carboxylic acid compound YH239, is a potent p53-MDM2 antagonizing and apoptosis-inducing agent IC50 value: Target: MDM2/p53 YH239-EE inhibits the growth of OCI-AML-3 cells with wild type p53 by inhibiting the p53-MDM2 interaction. YH239-EE induces cell... | **Cat. No.: HY-12287** |
| **Purity:** 99.25%  
**Clinical Data:** No Development Reported  
**Size:** 10mM x 1mL in DMSO, 10 mg, 50 mg |
PKD (Protein kinase D) is an evolutionarily conserved protein kinase family with structural, enzymological, and regulatory properties different from the PKC family members. Signaling through PKD is induced by a remarkable number of stimuli, including G-protein-coupled receptor agonists and polypeptide growth factors. PKD family of serine/threonine protein kinases has three members: PKD1, PKD2, PKD3. PKD1, the most studied member of the family, is increasingly implicated in the regulation of a complex array of fundamental biological processes, including signal transduction, cell proliferation and differentiation, membrane trafficking, secretion, immune regulation, cardiac hypertrophy and contraction, angiogenesis, and cancer. PKD mediates such a diverse array of normal and abnormal biological functions via dynamic changes in its spatial and temporal localization, combined with its distinct substrate specificity.
PKD Inhibitors & Modulators

CID 2011756  
**Cat. No.:** HY-13454

**Bioactivity:** CID 2011756 is an ATP competitive PKD inhibitor, with an IC\(_{50}\) of 3.2 \(\mu\)M for PKD1 in cell free assay, and also shows cellular pan-PKD inhibitory activity against PKD2 and PKD3 (IC\(_{50}\) 0.6 and 0.7 \(\mu\)M, respectively). CID 2011756 also has antitu...

**Purity:** 99.97%

**Clinical Data:** No Development Reported

**Size:** 10mM x 1mL in DMSO, 5 mg, 10 mg, 50 mg

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CID755673  
**Cat. No.:** HY-12239

**Bioactivity:** CID755673 is a potent PKD inhibitor with IC\(_{50}\)s of 182 nM, 280 nM and 227 nM for PKD1, PKD2 and PKD3, respectively.

**Purity:** 99.54%

**Clinical Data:** No Development Reported

**Size:** 10mM x 1mL in DMSO, 5 mg, 10 mg, 50 mg

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CRT0066101 dihydrochloride  
**Cat. No.:** HY-15698A

**Bioactivity:** CRT0066101 dihydrochloride is a potent and specific PKD inhibitor with IC\(_{50}\) values of 1, 2.5 and 2 nM for PKD1, 2, and 3 respectively.

**Purity:** 98.94%

**Clinical Data:** No Development Reported

**Size:** 10mM x 1mL in DMSO, 5 mg, 10 mg, 25 mg, 50 mg

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kb NB 142-70  
**Cat. No.:** HY-15528

**Bioactivity:** kb NB 142-70 is a potent PKD inhibitor, with IC\(_{50}\)s of 28.3, 58.7 and 53.2 nM for PKD1, PKD2, and PKD3, respectively. kb NB 142-70 also has antitumor activity.

**Purity:** 98.24%

**Clinical Data:** No Development Reported

**Size:** 10mM x 1mL in DMSO, 5 mg, 10 mg, 50 mg

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kb-NB77-78  
**Cat. No.:** HY-16698

**Bioactivity:** kb-NB77-78 is an analogue of CID797718, but shows no PKD inhibitory activity\(^1\).

**Purity:** 99.97%

**Clinical Data:** No Development Reported

**Size:** 10mM x 1mL in DMSO, 5 mg, 10 mg

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\(^1\) Reference: [1]
RIP kinase
Receptor-interacting protein kinases; RIPK

Receptor interacting protein 2 (RIP2), a serine/threonine kinase, is an adaptor molecule of NOD1 and NOD2, and genetic variation in this receptor is known to be associated with the severity of allergic asthma in children.

Receptor interacting protein kinase 2 (RIPK2) is critical for NOD-mediated NF-kB activation and cytokine production. WEHI-345, a selective RIPK2 kinase inhibitor, which delays RIPK2 ubiquitylation and NF-kB activation downstream of NOD engagement.

Receptor interacting protein kinase 3 (RIPK3) is a cytosolic master regulator of necroptosis. RIPK3 has an active serine/threonine kinase domain at the N-terminus, and a unique protein-protein interaction domain called the RIP homotypic interaction motif (RHIM) at the C-terminus. Both kinase activity and RHIM are indispensable for necroptosis. RIPK3 interacts with other RHIM-containing proteins such as RIPK1, Toll/interleukin-1 (IL-1) receptor domain-containing adaptor protein inducing TRIF or DAI. RIPK3 induces necroptosis, a type of regulated necrosis, through its kinase domain and RHIM.
## RIP kinase Inhibitors & Modulators

### cRIPGBM
Cat. No.: HY-125466

**Bioactivity:** cRIPGBM, a proapoptotic derivative of RIPGBM, a cell type-selective inducer of apoptosis in GBM cancer stem cells (CSCs) by binding to receptor-interacting protein kinase 2 (RIPK2), with an EC$_{50}$ of 68 nM in GBM-1 cells.\(^1\)

**Purity:** >98%

**Clinical Data:** No Development Reported

**Size:** 5 mg, 10 mg

### GNE684
Cat. No.: HY-128585

**Bioactivity:** GNE684 is a potent inhibitor of potnet receptor interacting protein 1 (RIP1), with mean K$_{i}$ values of 21 nM, 189 nM and 691 nM for human mouse and rat RIP1, respectively.\(^1\)

**Purity:** >98%

**Clinical Data:** No Development Reported

**Size:** 100 mg, 250 mg, 500 mg

### GSK'481
(GSK481)
Cat. No.: HY-100131

**Bioactivity:** GSK'481 can inhibit RIP1 WT S166 phosphorylation in human vs mouse plasmids overexpressed in HEK293T cells.

**Purity:** 98.0%

**Clinical Data:** No Development Reported

**Size:** 10mM x 1mL in DMSO, 2 mg, 5 mg, 10 mg, 50 mg, 100 mg

### GSK-843
Cat. No.: HY-125402

**Bioactivity:** GSK-843 is a receptor-interacting protein kinase 3 (RIP3 or RIPK3) inhibitor, which binds RIP3 kinase domain with an IC$_{50}$ of 8.6 nM, and inhibits kinase activity with an IC$_{50}$ of 6.5 nM.\(^1\)

**Purity:** 98.0%

**Clinical Data:** No Development Reported

**Size:** 10mM x 1mL in DMSO, 5 mg

### GSK2593074A
(GSK’074)
Cat. No.: HY-122909

**Bioactivity:** GSK2593074A (GSK’074) is a necroptosis inhibitor with dual targeting ability to both RIP1 and RIP3.\(^1\)

**Purity:** >98%

**Clinical Data:** No Development Reported

**Size:** 500 mg, 250 mg

### GSK2982772
Cat. No.: HY-101760

**Bioactivity:** GSK2982772 is an orally, potent and ATP competitive RIP1 kinase inhibitor with IC$_{50}$ values of 16 nM and 20 nM for human and monkey RIP1, respectively.

**Purity:** 98.0%

**Clinical Data:** Phase 2

**Size:** 10mM x 1mL in DMSO, 1 mg, 5 mg, 10 mg, 50 mg, 100 mg

### GSK3145095
Cat. No.: HY-111946

**Bioactivity:** GSK3145095 is a RIP1 kinase inhibitor with an IC$_{50}$ of 6.3 nM.\(^1\)

**Purity:** >98%

**Clinical Data:** No Development Reported

**Size:** 100 mg, 250 mg, 500 mg

### GSK547
Cat. No.: HY-114492

**Bioactivity:** GSK547, a highly selective and potent RIP1 inhibitor, inhibits macrophage-mediated adaptive immune tolerance in pancreatic cancer.\(^1\)

**Purity:** >98%

**Clinical Data:** No Development Reported

**Size:** 250 mg, 500 mg

### GSK583
Cat. No.: HY-100339

**Bioactivity:** GSK583 is a highly potent and selective inhibitor of RIP2 kinase, with IC$_{50}$ of 5 nM.

**Purity:** 98.64%

**Clinical Data:** No Development Reported

**Size:** 10mM x 1mL in DMSO, 2 mg, 5 mg, 10 mg, 50 mg, 100 mg
Bioactivity: GSK840 (GSK'840) is a receptor-interacting protein kinase 3 (RIP3 or RIPK3) inhibitor, which binds RIP3 kinase domain with an IC\textsubscript{50} of 0.9 nM, and inhibits kinase activity with an IC\textsubscript{50} of 0.3 nM \footnote{[1]}. Purity: 98.0% Clinical Data: No Development Reported Size: 10mM x 1mL in DMSO, 5 mg, 10 mg

Bioactivity: GSK963 is a chiral, highly potent and selective inhibitor of RIP1 kinase, with an IC\textsubscript{50} of 29 nM. GSK963 is a selective and potent inhibitor of necroptosis in murine and human cells in vitro \footnote{[1]}. Purity: >98% Clinical Data: No Development Reported Size: 5 mg, 10 mg, 25 mg

Bioactivity: HS-1371 is a potent and ATP-competitive receptor-interacting protein kinase 3 (RIP3) inhibitor with an IC\textsubscript{50} of 20.8 nM \footnote{[1]}. Purity: 98.49% Clinical Data: No Development Reported Size: 10mM x 1mL in DMSO, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

Bioactivity: Nec-4, a tricyclic derivative, is a potent receptor interacting protein 1 (RIP1) inhibitor, with an IC\textsubscript{50} of 2.6 μM, \textit{K}_i of 0.46 μM. Purity: >98% Clinical Data: No Development Reported Size: 250 mg, 500 mg

Bioactivity: Necrostatin 2 is a potent necroptosis inhibitor. EC\textsubscript{50} for inhibition of necroptosis in FADD-deficient Jurkat T cells treated with TNF-α is 0.05 μM. Necrostatin 2 is also a RIPK1 inhibitor. Purity: 99.97% Clinical Data: No Development Reported Size: 10mM x 1mL in DMSO, 5 mg, 10 mg, 50 mg

Bioactivity: Necrostatin 2 racemate is a potent necroptosis inhibitor, acts as a RIPK1 inhibitor lacking the IDO-targeting effect. Target: RIPK1. Necrostatin 2 racemate is a potent in vitro necroptosis inhibitors (exemplified by 1, EC50-0.05 uM) that also were efficacious in an animal model of ischemic stroke. Many... Purity: 99.10% Clinical Data: No Development Reported Size: 10mM x 1mL in DMSO, 1 mg, 5 mg, 10 mg, 50 mg

Bioactivity: Necrostatin 2 S enantiomer is the S enantiomer of Necrostatin 2. Necrostatin 2 is a potent necroptosis inhibitor, acts as a RIPK1 inhibitor lacking the IDO-targeting effect. Target: RIPK1 \footnote{[4]} Necrostatin 2 racemate is a potent in vitro necroptosis inhibitors (exemplified by 1, EC50-0.05 uM) that also were efficacious in an animal model of ischemic stroke. Many... Purity: 99.20% Clinical Data: No Development Reported Size: 10mM x 1mL in DMSO, 10 mg, 50 mg, 100 mg

Bioactivity: Necrostatin-1 (Nec-1) is a potent, selective and cell-permeable necroptosis inhibitor with an EC\textsubscript{50} of 490 nM in Jurkat cells. It acts by inhibiting the death domain kinase RIP (RIP1) in the necroptosis pathway. Purity: 99.20% Clinical Data: No Development Reported Size: 10mM x 1mL in DMSO, 10 mg, 50 mg, 100 mg

Bioactivity: RIP2 kinase inhibitor 1 is a receptor-interacting protein-2 (RIP2) kinase inhibitor extracted from patent WO/2014043446 A1, compound example 1. Purity: 98.11% Clinical Data: No Development Reported Size: 10mM x 1mL in DMSO, 1 mg, 5 mg, 10 mg, 50 mg, 100 mg

Bioactivity: RIP2 kinase inhibitor 2 is a receptor-interacting protein-2 (RIP2) kinase inhibitor extracted from patent WO/2014043437 A1, compound example 9. Purity: 99.95% Clinical Data: No Development Reported Size: 10mM x 1mL in DMSO, 1 mg, 5 mg, 10 mg, 50 mg, 100 mg
RIP2 Kinase Inhibitor 3  
Cat. No.: HY-112907

Bioactivity:  RIP2 Kinase Inhibitor 3 is a highly potent and selective inhibitor of receptor interacting protein-2 (RIP2) Kinase with an IC_{50} of 1 nM [1].

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

RIPA-56  
Cat. No.: HY-101032

Bioactivity:  RIPA-56 is a highly potent, selective, and metabolically stable inhibitor of receptor-interacting protein 1 (RIP1) with an IC_{50} of 13 nM.

Purity:  99.86%  
Clinical Data:  No Development Reported  
Size:  10mM x 1mL in DMSO, 10 mg, 50 mg, 100 mg, 200 mg

RIPK1-IN-7  
Cat. No.: HY-119933

Bioactivity:  RIPK1-IN-7 is a potent and selective receptor-interacting protein kinase 1 (RIPK1) inhibitor with a K_{d} of 4 nM and an enzymatic IC_{50} of 11 nM. RIPK1-IN-7 exhibits excellent antitumor activity in the experimental B16 melanoma model.

Purity:  >98%  
Clinical Data:  No Development Reported  
Size:  10mM x 1mL in DMSO, 5 mg, 10 mg, 50 mg, 100 mg

WEHI-345  
Cat. No.: HY-18937

Bioactivity:  WEHI-345 is a potent and selective inhibitor of RIPK2, with IC_{50} of 0.13 μM. IC_{50} value: 0.13 μM Target: RIPK2 in vitro: WEHI-345 is a selective RIPK2 kinase inhibitor, which delays RIPK2 ubiquitylation and NF-κB activation downstream of NOD engagement. WEHI-345 is an ATP analogue and was therefore...

Purity:  98.56%  
Clinical Data:  No Development Reported  
Size:  10mM x 1mL in DMSO, 5 mg, 10 mg, 50 mg, 100 mg
Survivin

Survivin is a member of the inhibitor of apoptosis (IAP) family. The survivin protein functions to inhibit caspase activation, thereby leading to negative regulation of apoptosis or programmed cell death. This has been shown by disruption of survivin induction pathways leading to increase in apoptosis and decrease in tumour growth. Survivin expression is highly regulated by the cell cycle and is only expressed in the G2-M phase. Survivin localizes to the mitotic spindle by interaction with tubulin during mitosis and may play a contributing role in regulating mitosis. Survivin is highly expressed in most cancers and associated with chemotherapy resistance, increased tumor recurrence, and shorter patient survival, making antisurvivin therapy an attractive cancer treatment strategy.
## Survivin Inhibitors & Modulators

### GDP366

- **Cat. No.:** HY-U00177

<table>
<thead>
<tr>
<th>Bioactivity</th>
<th>GDP366, a dual inhibitor of survivin and Op18, induces cell growth inhibition, cellular senescence and mitotic catastrophe in human cancer cells.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purity</td>
<td>99.73%</td>
</tr>
<tr>
<td>Clinical Data</td>
<td>No Development Reported</td>
</tr>
<tr>
<td>Size</td>
<td>10mM x 1mL in DMSO, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg</td>
</tr>
</tbody>
</table>

### Shepherdin 79-87

- **Cat. No.:** HY-P1750

<table>
<thead>
<tr>
<th>Bioactivity</th>
<th>Shepherdin (79-87) is amino acids 79 to 87 fragment of Shepherdin. Shepherdin is a peptidomimetic antagonist of the complex between Hsp90 and Survivin. Anticancer activity.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purity</td>
<td>&gt;98%</td>
</tr>
<tr>
<td>Clinical Data</td>
<td>No Development Reported</td>
</tr>
<tr>
<td>Size</td>
<td>10mM x 1mL in DMSO, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg</td>
</tr>
</tbody>
</table>

### YM-155 (Sepantronium bromide)

- **Cat. No.:** HY-10194

<table>
<thead>
<tr>
<th>Bioactivity</th>
<th>YM-155 is a survivin inhibitor with an IC_{50} of 0.54 nM.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purity</td>
<td>98.91%</td>
</tr>
<tr>
<td>Clinical Data</td>
<td>Phase 2</td>
</tr>
<tr>
<td>Size</td>
<td>10mM x 1mL in DMSO, 5 mg, 10 mg, 50 mg, 100 mg</td>
</tr>
</tbody>
</table>

### YM-155 hydrochloride

- **Cat. No.:** HY-10194A

<table>
<thead>
<tr>
<th>Bioactivity</th>
<th>YM-155 hydrochloride is a novel survivin suppressant with an IC_{50} of 0.54 nM for the inhibition of survivin promoter activity.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purity</td>
<td>&gt;98%</td>
</tr>
<tr>
<td>Clinical Data</td>
<td>No Development Reported</td>
</tr>
<tr>
<td>Size</td>
<td>5 mg, 10 mg, 50 mg, 100 mg</td>
</tr>
</tbody>
</table>
Thymidylate synthase (TS) is an E2F1-regulated enzyme that is essential for DNA synthesis and repair. Thymidylate synthase is an essential S phase enzyme required for DNA synthesis. Thymidylate synthase plays a central role in the biosynthesis of thymidylate, an essential precursor for DNA synthesis.

Thymidylate synthase catalyzes the reductive methylation of 2′-deoxyuridine 5-monophosphate (dUMP) by transfer of a methylene group from a cofactor, \( \text{CH}_2\text{H}_4 \) folate, to generate deoxythymidine-5′-monophosphate (dTMP). dTMP is further phosphorylated to the triphosphate state (dTTP), which is a direct precursor for DNA synthesis. Since the TS catalyzed reaction is the sole intracellular de novo source of dTMP, the inhibition of TS results in the cessation of cellular proliferation and growth.

Thymidylate synthase protein and mRNA levels are elevated in many human cancers, and high TS levels have been correlated with poor prognosis in patients with colorectal, breast, cervical, bladder, kidney, and non-small cell lung cancers.
## Thymidylate Synthase Inhibitors & Modulators

<table>
<thead>
<tr>
<th>Compound</th>
<th>Cat. No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nolatrexed dihydrochloride (AG 337; Thymitaq)</td>
<td>HY-108474</td>
</tr>
<tr>
<td><strong>Bioactivity:</strong></td>
<td>Nolatrexed dihydrochloride (AG 337) is a non-competitive lipophilic inhibitor of thymidylate synthase, interacts at the folate cofactor binding site of the enzyme, with a $K_i$ of 11 nM for human thymidylate synthase [1]. Nolatre...</td>
</tr>
<tr>
<td><strong>Purity:</strong></td>
<td>98.21%</td>
</tr>
<tr>
<td><strong>Clinical Data:</strong></td>
<td>No Development Reported</td>
</tr>
<tr>
<td><strong>Size:</strong></td>
<td>10mM x 1mL in DMSO, 5 mg, 10 mg, 50 mg</td>
</tr>
</tbody>
</table>

| Raltitrexed (ZD1694; D1694; ICI-D1694) | HY-10821 |
| **Bioactivity:** | Raltitrexed is an antimetabolite drug used in chemotherapy, acting by inhibiting thymidylate synthase. |
| **Purity:** | 99.21% |
| **Clinical Data:** | Launched |
| **Size:** | 10mM x 1mL in DMSO, 10 mg, 50 mg, 100 mg |

| Tipiracil | HY-A0063A |
| **Bioactivity:** | Tipiracil is a thymidine phosphorylase (TPase) inhibitor. |
| **Purity:** | 97.83% |
| **Clinical Data:** | Launched |
| **Size:** | 5 mg, 10 mg, 50 mg, 100 mg |

| Trifluridine (Trifluorothymidine; 5-Trifluorothymidine; TFT) | HY-A0061 |
| **Bioactivity:** | Trifluridine (Trifluorothymidine; 5-Trifluorothymidine; TFT) is an irreversible thymidylate synthase inhibitor, and thereby suppresses DNA synthesis. Trifluridine is an antiviral drug for herpes simplex virus (HSV) infection. |
| **Purity:** | 99.69% |
| **Clinical Data:** | Launched |
| **Size:** | 10mM x 1mL in DMSO, 50 mg, 100 mg, 200 mg |

| Trifluridine-tipiracil hydrochloride mixture (TAS-102) | HY-16478 |
| **Bioactivity:** | Trifluridine-tipiracil hydrochloride mixture (TAS-102) is a novel oral combination drug that consists of an antineoplastic thymidine-based nucleoside analog, trifluorothymidine, and a potent thymidine phosphorylase inhibitor, tipiracil, in a 1:0.5 molar ratio. |
| **Purity:** | 99.72% |
| **Clinical Data:** | Launched |
| **Size:** | 5 mg, 10 mg, 50 mg, 100 mg |
TNF Receptor

Tumor Necrosis Factor Receptor; TNFR

Tumor necrosis factor (TNF) is a major mediator of apoptosis as well as inflammation and immunity, and it has been implicated in the pathogenesis of a wide spectrum of human diseases, including sepsis, diabetes, cancer, osteoporosis, multiple sclerosis, rheumatoid arthritis, and inflammatory bowel diseases.

TNF-α is a 17-kDa protein consisting of 157 amino acids that is a homotrimer in solution. In humans, the gene is mapped to chromosome 6. Its bioactivity is mainly regulated by soluble TNF-α–binding receptors. TNF-α is mainly produced by activated macrophages, T lymphocytes, and natural killer cells. Lower expression is known for a variety of other cells, including fibroblasts, smooth muscle cells, and tumor cells. In cells, TNF-α is synthesized as pro-TNF (26 kDa), which is membrane-bound and is released upon cleavage of its pro domain by TNF-converting enzyme (TACE).

Many of the TNF-induced cellular responses are mediated by either one of the two TNF receptors, TNF-R1 and TNF-R2, both of which belong to the TNF receptor super-family. In response to TNF treatment, the transcription factor NF-κB and MAP kinases, including ERK, p38 and JNK, are activated in most types of cells and, in some cases, apoptosis or necrosis could also be induced. However, induction of apoptosis or necrosis is mainly achieved through TNFR1, which is also known as a death receptor. Activation of the NF-κB and MAPKs plays an important role in the induction of many cytokines and immune-regulatory proteins and is pivotal for many inflammatory responses.
TNF Receptor Inhibitors & Modulators

Adalimumab  
(Anti-Human TNF-alpha, Human Antibody)  
Cat. No.: HY-P9908

Bioactivity: Adalimumab is a human monoclonal IgG1 antibody targeting tumour necrosis factor-α (TNF-α).
Purity: 98.12%  
Clinical Data: Phase 4  
Size: 1 mg, 5 mg

Astilbin  
Cat. No.: HY-N0509

Bioactivity: Astilbin, a flavonoid compound, is isolated from the rhizome of Smilax glabra. Astilbin enhances NRF2 activation. Astilbin also suppresses TNF-α expression and NF-κB activation.
Purity: 99.43%  
Clinical Data: No Development Reported  
Size: 10 mM x 1 mL in DMSO, 5 mg, 25 mg, 50 mg, 100 mg

AX-024  
Cat. No.: HY-107390

Bioactivity: AX-024 is an cytokine release inhibitor which can strongly inhibit the production of interleukin-6 (IL-6), tumor necrosis factor-α (TNFa), interferon-γ (IFN-γ), IL-10 and IL-17A.
Purity: 98.0%  
Clinical Data: Phase 1  
Size: 10 mM x 1 mL in DMSO, 2 mg, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

AX-024 hydrochloride  
Cat. No.: HY-107390A

Bioactivity: AX-024 hydrochloride is an cytokine release inhibitor which can strongly inhibit the production of interleukin-6 (IL-6), tumor necrosis factor-α (TNFa), interferon-γ (IFN-γ), IL-10 and IL-17A.
Purity: 99.29%  
Clinical Data: Phase 1  
Size: 10 mM x 1 mL in DMSO, 2 mg, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

Bioymifi (DR5 Activator)  
Cat. No.: HY-18377

Bioactivity: Bioymifi (DR5 Activator) is the first novel and potent small-molecule activator of the TRAIL receptor DR5 in human cancer cells.
Purity: 98.0%  
Clinical Data: No Development Reported  
Size: 10 mM x 1 mL in DMSO, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

C 87  
Cat. No.: HY-100735

Bioactivity: C87 is a novel small-molecule TNFα inhibitor; potently inhibits TNFa-induced cytotoxicity with an IC50 of 8.73 μM.
Purity: 98.0%  
Clinical Data: No Development Reported  
Size: 10 mM x 1 mL in DMSO, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

C25-140  
Cat. No.: HY-120934

Bioactivity: C25-140, a first-in-class TRAF6-Ubc13 inhibitor, directly binds to TRAF6, thereby blocks the interaction of TRAF6 with Ubc13 and as a consequence lowers TRAF6 activity and combats autoimmunity.[1]
Purity: >98%  
Clinical Data: No Development Reported  
Size: 10 mM x 1 mL in DMSO, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

CDC801  
Cat. No.: HY-U00179

Bioactivity: CDC801 is a potent and orally active phosphodiesterase 4 (PDE4) and tumor necrosis factor-α (TNF-α) inhibitor with IC50 of 1.1 μM and 2.5 μM, respectively.
Purity: >98%  
Clinical Data: No Development Reported  
Size: 1 mg, 5 mg, 10 mg, 20 mg

Cynaropicrin  
Cat. No.: HY-N2350

Bioactivity: Cynaropicrin is a sesquiterpene lactone which can inhibit tumor necrosis factor (TNF-α) release with IC50 of 8.24 and 3.18 μM for murine and human macrophage cells, respectively. Cynaropicrin also inhibits the increase of cartilage degradation factor (MMP13) and suppresses NF-κB...
Purity: >98%  
Clinical Data: No Development Reported  
Size: 5 mg, 10 mg

DCVC  
(S-(1E)-1,2-dichloroethyl)–L-cysteine  
Cat. No.: HY-19717

Bioactivity: DCVC inhibits pathogen-stimulated TNF-α in human extra placental membranes in vitro. Target: TNF-α in vitro: DCVC inhibits pathogen stimulated cytokine release from tissue punch cultures. DCVC (5-50 μM) significantly inhibits LTA-, LPS-, and GBS-stimulated cytokine release from tissue cultures...
Purity: 99.89%  
Clinical Data: No Development Reported  
Size: 10 mM x 1 mL in DMSO, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

www.MedChemExpress.com
### Etanercept

**Bioactivity:** Etanercept is a **tumor necrosis factor (TNF)** inhibitor used for treating rheumatoid arthritis, ankylosing spondylitis, psoriatic arthritis and plaque psoriasis.

**Purity:** 97.0%

**Clinical Data:** No Development Reported

**Size:** 5 mg

---

### Eucalyptol

(1,8-Cineole)

**Bioactivity:** Eucalyptol is an inhibitor of **5-HT** receptor, potassium channel, **TNF-α** and **IL-1β**.

**Purity:** 98.0%

**Clinical Data:** Phase 3

**Size:** 10mM x 1mL in DMSO, 50 mg

---

### Fisetin

**Bioactivity:** Fisetin is a natural flavonol found in many fruits and vegetables with various benefits, such as antioxidant, anticancer, neuroprotection effects.

**Purity:** 98.02%

**Clinical Data:** Phase 2

**Size:** 10mM x 1mL in DMSO, 100 mg, 500 mg, 1 g

---

### Forsythoside B

**Bioactivity:** Forsythoside B is a phenylethanoid glycoside isolated from the leaves of Lamiophlomis rotata Kudo, a Chinese folk medicinal plant for treating inflammatory diseases and promoting blood circulation. Forsythoside B could inhibit **TNF-alpha**, **IL-6**, IκB and modulate NF-κB.

**Purity:** 99.99%

**Clinical Data:** No Development Reported

**Size:** 10mM x 1mL in DMSO, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

---

### Geraniin

**Bioactivity:** Geraniin is a **TNF-α** releasing inhibitor with numerous activities including anticancer, anti-inflammatory, and anti-hyperglycemic activities, with an IC₅₀ of 43 μM.

**Purity:** 99.10%

**Clinical Data:** No Development Reported

**Size:** 10mM x 1mL in DMSO, 5 mg, 10 mg

---

### Ginsenoside Rc

(Panaxoside Rc)

**Bioactivity:** Ginsenoside Rc, one of major Ginsenosides from Panax ginseng, enhances GABA receptor (GABA<sub>ᵦ</sub>)-mediated ion channel currents (I<sub>GABA</sub>); Ginsenoside Rc inhibits the expression of **TNF-α** and **IL-1β**.

**Purity:** 98.0%

**Clinical Data:** No Development Reported

**Size:** 10mM x 1mL in Water, 5 mg, 10 mg

---

### Ginsenoside Rh1

(Prosapogenin A2; Sanchinoside B2; Sanchinoside Rh1)

**Bioactivity:** Ginsenoside Rh1 (Prosapogenin A2; Sanchinoside B2; Sanchinoside Rh1) is isolated from the root of Panax Ginseng. Ginsenoside Rh1 inhibits the expression of PPAR-γ, **TNF-α**, **IL-6**, and IκB.

**Purity:** 98.17%

**Clinical Data:** No Development Reported

**Size:** 10mM x 1mL in DMSO, 5 mg, 10 mg

---

### Hispidol

((Z)-Hispidol)

**Bioactivity:** Hispidol ((Z)-Hispidol) is a potential therapeutic for inflammatory bowel disease; inhibits **TNF-α** induced adhesion of monocytes to colon epithelial cells with an IC₅₀ of 0.50 μM.

**Purity:** 98.57%

**Clinical Data:** No Development Reported

**Size:** 10mM x 1mL in DMSO, 1 mg, 5 mg, 10 mg, 50 mg, 100 mg, 200 mg, 500 mg

---

### Homoplantaginin

**Bioactivity:** Homoplantaginin is a flavonoid from a traditional Chinese medicine Salvia plebeia with antiinflammatory and antioxidant properties. Homoplantaginin could inhibit **TNF-α** and **IL-6** mRNA expression, IKKβ and NF-κB phosphorylation.

**Purity:** 99.81%

**Clinical Data:** No Development Reported

**Size:** 10mM x 1mL in DMSO, 5 mg, 10 mg, 25 mg, 50 mg

---

### Hypaconitine

**Bioactivity:** Hypaconitine, an active and highly toxic constituent derived from Aconitum species, is widely used to treat rheumatism.

**Purity:** 98.0%

**Clinical Data:** No Development Reported

**Size:** 10mM x 1mL in DMSO, 10 mg, 50 mg
**LY 303511**

**Cat. No.: HY-15643**

**Bioactivity:** LY303511 is a structural analogue of LY294002. LY303511 does not inhibit PI3K. LY303511 enhances TRAIL sensitivity of SHEP-1 neuroblastoma cells. LY303511 reversibly blocks K⁺ currents (IC50 = 64.6±9.1 μM) in MIN6 islet cells.

**Purity:** >98%

**Clinical Data:** No Development Reported

**Size:** 5 mg, 10 mg, 50 mg

---

**LY 303511 hydrochloride**

**Cat. No.: HY-15643A**

**Bioactivity:** LY303511 hydrochloride is a structural analogue of LY294002. LY303511 does not inhibit PI3K. LY303511 enhances TRAIL sensitivity of SHEP-1 neuroblastoma cells. LY303511 reversibly blocks K⁺ currents (IC50 = 64.6±9.1 μM) in MIN6 islet cells.

**Purity:** >98%

**Clinical Data:** No Development Reported

**Size:** 10mM x 1mL in DMSO, 5 mg, 10 mg, 50 mg

---

**Mesaconitine**

**Cat. No.: HY-N0724**

**Bioactivity:** Mesaconitine is the main active component of genus aconitum plants.

**Purity:** 98.97%

**Clinical Data:** No Development Reported

**Size:** 5 mg, 10 mg

---

**Methylthiouracil**

(MTU)

**Cat. No.: HY-B0513**

**Bioactivity:** Methylthiouracil is an antithyroid agent. Methylthiouracil suppresses the production of TNF-α and IL-6, and the activation of NF-κB and ERK1/2.

**Purity:** 98.0%

**Clinical Data:** Launched

**Size:** 10mM x 1mL in DMSO, 50 mg, 100 mg

---

**Mulberroside A**

**Cat. No.: HY-N0619**

**Bioactivity:** Mulberroside A, the major active anti-tyrosinase compound in the root bark extract of Morus alba L. (Moraceae), is widely employed as an active ingredient in whitening cosmetics. IC50 value: 1.29 μmol/L (inhibition of the monophenolase activity); KI value: 0.385 μmol/L (the inhibition constant of the...

**Purity:** 99.53%

**Clinical Data:** No Development Reported

**Size:** 10mM x 1mL in DMSO, 5 mg, 10 mg, 50 mg

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**Neochlorogenic acid**

(trans-5-O-Caffeoylquinic acid)

**Cat. No.: HY-N0722**

**Bioactivity:** Neochlorogenic acid is a natural polyphenolic compound found in dried fruits and other plants. Neochlorogenic acid inhibits the production of TNF-α and IL-1β. Neochlorogenic acid also inhibits phosphorylated NF-κB p65 and p38 MAPK.

**Purity:** 99.46%

**Clinical Data:** No Development Reported

**Size:** 10mM x 1mL in DMSO, 5 mg, 10 mg

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**Pentosan Polysulfate**

**Cat. No.: HY-A0203**

**Bioactivity:** Pentosan Polysulfate is a semi-synthetic drug used to treat various medical conditions including thrombi and interstitial cystitis.

**Purity:** 98.0%

**Clinical Data:** Launched

**Size:** 100 mg

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**QNZ**

(EVP4593)

**Cat. No.: HY-13812**

**Bioactivity:** QNZ (EVP4593) shows strong inhibitory effects on NF-κB transcriptional activation and TNF-α production with IC50s of 11 and 7 nM, respectively. QNZ (EVP4593) is a neuroprotective inhibitor of SOC channel.

**Purity:** 98.46%

**Clinical Data:** No Development Reported

**Size:** 10mM x 1mL in DMSO, 5 mg, 10 mg, 50 mg

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**R-7050**

(TNF-α Antagonist III)

**Cat. No.: HY-110203**

**Bioactivity:** R-7050 is a tumor necrosis factor receptor (TNFR) antagonist with greater selectivity toward TNFa.

**Purity:** 98.83%

**Clinical Data:** No Development Reported

**Size:** 10mM x 1mL in DMSO, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

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www.MedChemExpress.com
**Roquinimex**
(Linomide; FCF89; ABR212616)  
Cat. No.: HY-13743

**Bioactivity:** Roquinimex (Linomide; PNU212616; ABR212616) is a quinoline derivative immunostimulant which increases NK cell activity and macrophage cytotoxicity; inhibits angiogenesis and reduces the secretion of TNF alpha. IC50 value: Target: TNF alpha. 

**Purity:** 98.88%

**Clinical Data:** No Development Reported

**Size:** 
- 10mM x 1mL in DMSO,
- 10 mg, 50 mg

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**Shikonin**
(C.I. 75535; Isoarnebin 4)  
Cat. No.: HY-N0822

**Bioactivity:** Shikonin is a major component of a Chinese herbal medicine named zicao. Shikonin has shown various biological activities, including inhibition of TNF-α, NF-κB, HIV-1.

**Purity:** 99.80%

**Clinical Data:** No Development Reported

**Size:** 
- 10mM x 1mL in DMSO,
- 10 mg, 25 mg, 50 mg, 100 mg

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**Sinensetin**
(Pedalin permethyl ether)  
Cat. No.: HY-N0297

**Bioactivity:** Sinensetin is a methylated flavone found in certain citrus fruits. possess potent antiangiogenesis and anti-inflammatory, sinensetin enhances adipogenesis and lipolysis. In vitro: Sinensetin promotes adipogenesis in 3T3-L1 preadipocytes growing in incomplete differentiation medium, sinensetin...

**Purity:** 99.22%

**Clinical Data:** No Development Reported

**Size:** 
- 10mM x 1mL in DMSO,
- 5 mg, 10 mg, 25 mg

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**SPD304**  
Cat. No.: HY-111255

**Bioactivity:** SPD304 is a selective inhibitor of tumor necrosis factor α (TNFα) and promotes dissociation of TNF trimers and therefore blocks the interaction of TNF and its receptor, with an IC50 of 22 µM for inhibiting in vitro TNF receptor 1 (TNF...)

**Purity:** 99.0%

**Clinical Data:** No Development Reported

**Size:** 1 mg

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**Taurochenodeoxycholic acid**
(12-Deoxycholyltaurine)  
Cat. No.: HY-N2027

**Bioactivity:** Taurochenodeoxycholic acid is one of the main bioactive substances of animals’ bile acid.

**Purity:** 99.80%

**Clinical Data:** Launched

**Size:** 
- 10mM x 1mL in DMSO,
- 50 mg

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**TIC10**
(ONC-201)  
Cat. No.: HY-15615A

**Bioactivity:** TIC10 is a potent, orally active, and stable TRAIL inducer which acts by inhibiting Akt and ERK, consequently activating Foxo3a and significantly inducing cell surface TRAIL.

**Purity:** 99.68%

**Clinical Data:** Phase 2

**Size:** 
- 10mM x 1mL in DMSO,
- 5 mg, 10 mg, 50 mg, 100 mg, 200 mg

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**TNF-α-IN-1**  
Cat. No.: HY-112275

**Bioactivity:** TNF-α-IN-1 is a TNF-α inhibitor extracted from patent US20030096841A1, compound example I-7.

**Purity:** >98%

**Clinical Data:** No Development Reported

**Size:** 
- 250 mg, 500 mg