NF-κB

Rel/NF-κB proteins are dimeric, DNA sequence-specific transcription factors that coordinate inflammatory responses; innate and adaptive immunity; and cellular differentiation, proliferation, and survival in almost all multicellular organisms. In most cells NF-κB exists in the cytoplasm in an inactive complex bound to IκBα. The NF-κB network consists of five family member protein monomers (p65/RelA, RelB, cRel, p50, and p52) that form homodimers or heterodimers that bind DNA differentially and are regulated by two pathways: the canonical, NF-κB essential modulator (NEMO)-dependent pathway and the noncanonical, NEMO-independent pathway.

The IκBs bind to NF-κB dimers and sterically block the function of their NLSs, thereby causing their cytoplasmic retention. Potent NF-κB activators, such as TNFα and IL-1, cause almost complete degradation of IκBs (especially IκBα) by the 26S proteasome, and NF-κB is activated and enters the nucleus. Nfkb2/p100 is the primary signaling node at which canonical and noncanonical signals interact. NIK/IKK1 processes p100 into p52, enabling the activity of RelB, NIK degrades IκBδ, allowing for sustained RelA activity, and canonical pathway activity may boost noncanonical pathway activation of RelB:p52.

Activation of the NF-κB pathway is involved in the pathogenesis of chronic inflammatory diseases, such as asthma, rheumatoid arthritis, and inflammatory bowel disease. In addition, altered NF-κB regulation may be involved in other diseases such as atherosclerosis and Alzheimer’s disease and a variety of human cancers. Therefore, numerous drugs, natural products, and normal or recombinant proteins that inhibits NF-κB activation can used in the treatment of NF-κB-related diseases.

References:
Target List in NF-κB

- IKK .............................. 3
- Keap1-Nrf2 .......................... 7
- MALT1 .............................. 11
- NF-κB .............................. 13
- Reactive Oxygen Species .............. 23
IKK (IκB kinase) is an enzyme complex that is involved in propagating the cellular response to inflammation. An IκB kinase is an enzyme that catalyzes the chemical reaction: ATP + IκB protein ADP + IκB phosphoprotein. The IκB kinase enzyme complex is part of the upstream NF-κB signal transduction cascade. The IκBα (inhibitor of kappa B) protein inactivates the NF-κB transcription factor by masking the nuclear localization signals of NF-κB proteins and keeping them sequestered in an inactive state in the cytoplasm. IKK specifically, phosphorylates the inhibitory IκBα protein. This phosphorylation results in the dissociation of IκBα from NF-κB. NF-κB, which is free migrates into the nucleus and activates the expression of at least 150 genes; some of which are anti-apoptotic. IKK belongs to the family of transferases, specifically those transferring a phosphate group to the sidechain oxygen atom of serine or threonine residues in proteins.
# IKK Inhibitors & Modulators

## ACHP Hydrochloride
(IKK-2 Inhibitor VIII)

**Cat. No.:** HY-13060

**Bioactivity:** ACHP Hydrochloride is a highly potent and selective IKK-β inhibitor with an IC₅₀ of 8.5 nM.

**Purity:** 98.03%

**Clinical Data:** No Development Reported

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

## Amlexanox
(AA673; Amoxanox; CHX3673)

**Cat. No.:** HY-80713

**Bioactivity:** AmLexanox is a specific inhibitor of IKKε and TBK1 and inhibits the IKKε and TBK1 activity determined by MBP phosphorylation with an IC₅₀ of approximately 1-2 μM.

**Purity:** 99.32%

**Clinical Data:** Launched

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

## AZD3264

**Cat. No.:** HY-19362

**Bioactivity:** AZD3264 is a selective IkB-kinase IKK2 inhibitor.

**Purity:** 98.77%

**Clinical Data:** No Development Reported

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

## BAY 11-7082
(BAY 11-7821)

**Cat. No.:** HY-13453

**Bioactivity:** BAY 11-7082 is a NF-κB inhibitor which decreases NF-κB by inhibiting TNF-α-induced phosphorylation of IkB-α. BAY 11-7082 inhibits ubiquitin-specific protease USP7 and USP21 with IC₅₀ of 0.19 μM and 0.96 μM, respectively.

**Purity:** 99.42%

**Clinical Data:** No Development Reported

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

## Bay 65-1942 free base

**Cat. No.:** HY-50949

**Bioactivity:** Bay 65-1942 free base is an ATP-competitive and selective IKKβ inhibitor.

**Purity:** >98%

**Clinical Data:** No Development Reported

**Size:** 5 mg, 10 mg

## Bay 65-1942 hydrochloride

**Cat. No.:** HY-50948

**Bioactivity:** Bay 65-1942 hydrochloride is an ATP-competitive and selective IKKβ inhibitor.

**Purity:** 99.05%

**Clinical Data:** No Development Reported

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

## Bay 65-1942 R form

**Cat. No.:** HY-50949A

**Bioactivity:** Bay 65-1942 R form is the less active R-form of Bay 65-1942. Bay 65-1942 is an ATP-competitive and selective IKKβ inhibitor.

**Purity:** >98%

**Clinical Data:** No Development Reported

**Size:** 5 mg, 10 mg

## BI605906

**Cat. No.:** HY-13019

**Bioactivity:** BI605906 is a novel IKKβ inhibitor with an IC₅₀ value of 380 nM when assayed at 0.1 mM ATP.

**Purity:** 99.68%

**Clinical Data:** No Development Reported

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

## BMS-066

**Cat. No.:** HY-18710

**Bioactivity:** BMS-066 is an IKKβ/Tyk2 pseudokinase inhibitor, with IC₅₀ of 9 nM and 72 nM, respectively.

**Purity:** >98%

**Clinical Data:** No Development Reported

**Size:** 250 mg, 500 mg

## BMS-345541 free base

**Cat. No.:** HY-10519

**Bioactivity:** BMS-345541 free base is a selective inhibitor of the catalytic subunits of IKK (IKK-2 IC₅₀=0.3 μM, IKK-1 IC₅₀=4 μM). BMS-345541 binds at an allosteric site of IKK.

**Purity:** 99.17%

**Clinical Data:** No Development Reported

**Size:** 10mM x 1mL in DMSO, 5 mg, 50 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>BMS-345541 hydrochloride</strong></td>
<td>HY-10518</td>
<td>BMS-345541 hydrochloride is a selective inhibitor of the catalytic subunits of IKK (IKK-2 IC&lt;sub&gt;50&lt;/sub&gt;=0.3 μM, IKK-1 IC&lt;sub&gt;50&lt;/sub&gt;=4 μM). BMS-345541 binds at an allosteric site of IKK.</td>
<td>99.77%</td>
<td>No Development Reported</td>
<td>10mM x 1mL in DMSO, 5 mg, 10 mg, 50 mg</td>
</tr>
<tr>
<td><strong>Ertiprotifib (PTP 112)</strong></td>
<td>HY-19383</td>
<td>Ertiprotifib is an inhibitor of PTP18, IκB kinase β (IKK-β), and a dual PPARα and PPARβ agonist, with an IC&lt;sub&gt;50&lt;/sub&gt; of 1.6 μM for PTP18, 400 nM for IKK-β, an EC&lt;sub&gt;50&lt;/sub&gt; of ~1 μM for PPARα/PPARβ.</td>
<td>&gt;98%</td>
<td>No Development Reported</td>
<td>250 mg, 500 mg</td>
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<tr>
<td><strong>GSK319347A</strong></td>
<td>HY-14682</td>
<td>GSK319347A is a dual inhibitor of TBK1 and IKKε with IC&lt;sub&gt;50&lt;/sub&gt; of 93 nM and 469 nM, respectively. GSK319347A also inhibits IKK2 with an IC&lt;sub&gt;50&lt;/sub&gt; of 790 nM.</td>
<td>98.0%</td>
<td>No Development Reported</td>
<td>10mM x 1mL in DMSO, 5 mg</td>
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<tr>
<td><strong>IKK 16</strong></td>
<td>HY-13687</td>
<td>IKK 16 is a selective IkB kinase (IKK) inhibitor for IKK2, IKK complex and IKK1 with IC&lt;sub&gt;50&lt;/sub&gt; of 40 nM, 70 nM and 200 nM, respectively. IKK16 also inhibits leucine-rich repeat kinase-2 (LRRK2) with an IC&lt;sub&gt;50&lt;/sub&gt; of 50 nM.</td>
<td>99.78%</td>
<td>No Development Reported</td>
<td>10mM x 1mL in DMSO, 10 mg, 50 mg</td>
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<tr>
<td><strong>IKK-IN-1</strong></td>
<td>HY-13873</td>
<td>IKK-IN-1 is an inhibitor of IKK extracted from patent WO2002024679A1, compound example 18–13.</td>
<td>95.04%</td>
<td>No Development Reported</td>
<td>10mM x 1mL in DMSO, 1 mg, 5 mg, 10 mg</td>
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<tr>
<td><strong>IMD-0354 (IKK2 Inhibitor V)</strong></td>
<td>HY-10172</td>
<td>IMD-0354 is a selective IκB kinase (IKK) inhibitor which inhibits NF-κB activity. IMD0354 inhibits TNF-α induced NF-κB transcription activity with an IC&lt;sub&gt;50&lt;/sub&gt; of 1.2±0.3 uM.</td>
<td>99.46%</td>
<td>No Development Reported</td>
<td>10mM x 1mL in DMSO, 5 mg, 10 mg, 50 mg</td>
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<tr>
<td><strong>IMD-0560</strong></td>
<td>HY-105661</td>
<td>IMD-0560 is a novel IκB kinase β inhibitor.</td>
<td>98.68%</td>
<td>No Development Reported</td>
<td>10mM x 1mL in DMSO, 1 mg, 5 mg, 10 mg, 50 mg</td>
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<tr>
<td><strong>INH14</strong></td>
<td>HY-114454</td>
<td>INH14 is a cell permeable inhibitor of IKKα/IKKβ, with IC&lt;sub&gt;50&lt;/sub&gt; of 8.97 and 3.59 μM, respectively. INH14 inhibits the IKKα/β-dependent TLR inflammatory response. INH14 also inhibits downstream of TAK1/TAB1 and NF-κB pathwa...</td>
<td>98.0%</td>
<td>No Development Reported</td>
<td>10mM x 1mL in DMSO, 5 mg, 10 mg, 50 mg</td>
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<tr>
<td><strong>LY2409881</strong></td>
<td>HY-B0788</td>
<td>LY2409881 is a selective IkB kinase β (IKK2) inhibitor with an IC&lt;sub&gt;50&lt;/sub&gt; of 30 nM.</td>
<td>98.89%</td>
<td>No Development Reported</td>
<td>5 mg, 10 mg, 50 mg, 100 mg</td>
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<tr>
<td><strong>LY2409881 trihydrochloride</strong></td>
<td><strong>MLN120B (ML120B)</strong></td>
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<td><strong>Bioactivity:</strong></td>
<td><strong>Bioactivity:</strong></td>
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<tr>
<td>LY2409881 trihydrochloride is a selective IκB kinase β (IKK2) inhibitor with an IC\textsubscript{50} of 30 nM.</td>
<td>MLN120B is a specific, ATP competitive IKKβ inhibitor with an IC\textsubscript{50} of 60 nM.</td>
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<td><strong>Purity:</strong></td>
<td><strong>Purity:</strong></td>
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<td>98.89%</td>
<td>99.56%</td>
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<td>No Development Reported</td>
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<td>10mM x 1mL in DMSO, 5 mg, 10 mg, 50 mg, 100 mg</td>
<td>10mM x 1mL in DMSO, 5 mg, 10 mg, 50 mg</td>
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<table>
<thead>
<tr>
<th><strong>MRT67307</strong></th>
<th><strong>PS-1145</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cat. No.: HY-13018</strong></td>
<td><strong>Cat. No.: HY-18008</strong></td>
</tr>
<tr>
<td><strong>Bioactivity:</strong></td>
<td><strong>Bioactivity:</strong></td>
</tr>
<tr>
<td>MRT67307 is a dual inhibitor of the IKKε and TBK-1 with IC\textsubscript{50} of 160 and 19 nM, respectively. MRT67307 also inhibits ULK1 and ULK2 with IC\textsubscript{50} of 45 and 38 nM, respectively.</td>
<td>PS-1145 is an IκB kinase (IKK) inhibitor with an IC\textsubscript{50} of 88 nM.</td>
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<td><strong>Purity:</strong></td>
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</tr>
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<td>99.00%</td>
<td>99.85%</td>
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<td>10mM x 1mL in DMSO, 5 mg, 10 mg, 50 mg, 100 mg</td>
<td>10mM x 1mL in DMSO, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg</td>
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<table>
<thead>
<tr>
<th><strong>SC-514</strong></th>
<th><strong>TBK1/IKKε-IN-1</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cat. No.: HY-13802</strong></td>
<td><strong>Cat. No.: HY-U00457</strong></td>
</tr>
<tr>
<td><strong>Bioactivity:</strong></td>
<td><strong>Bioactivity:</strong></td>
</tr>
<tr>
<td>SC-514 is a selective IKK-2 inhibitor (IC\textsubscript{50}=11.2±4.7 μM), which does not inhibit other IKK isoforms or other serine-threonine and tyrosine kinases.</td>
<td>TBK1/IKKε-IN-1 is a dual TBK1 and IKKε inhibitor extracted from patent US20160376283 A1, Compound 274 in Example 60, has IC\textsubscript{50} values of &lt;100 nM.</td>
</tr>
<tr>
<td><strong>Purity:</strong></td>
<td><strong>Purity:</strong></td>
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<tr>
<td>99.99%</td>
<td>&gt;98%</td>
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<tr>
<td><strong>Clinical Data:</strong></td>
<td><strong>Clinical Data:</strong></td>
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<tr>
<td>No Development Reported</td>
<td>No Development Reported</td>
</tr>
<tr>
<td><strong>Size:</strong></td>
<td><strong>Size:</strong></td>
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<td>10mM x 1mL in DMSO, 10 mg, 50 mg</td>
<td>5 mg, 10 mg, 25 mg</td>
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<table>
<thead>
<tr>
<th><strong>TBK1/IKKε-IN-2</strong></th>
<th><strong>TBK1/IKKε-IN-5</strong></th>
</tr>
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<tbody>
<tr>
<td><strong>Cat. No.: HY-12453</strong></td>
<td><strong>Cat. No.: HY-128679</strong></td>
</tr>
<tr>
<td><strong>Bioactivity:</strong></td>
<td><strong>Bioactivity:</strong></td>
</tr>
<tr>
<td>TBK1/IKKε-IN-2 is a dual TBK1 and IKKε inhibitor.</td>
<td>TBK1/IKKε-IN-5 (compound 1) is a dual TBK1 and IKKε inhibitor, with IC\textsubscript{50} values of 1 nM and 5.6 nM for TBK1 and IKKε, respectively.</td>
</tr>
<tr>
<td><strong>Purity:</strong></td>
<td><strong>Purity:</strong></td>
</tr>
<tr>
<td>98.50%</td>
<td>&gt;98%</td>
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<td>No Development Reported</td>
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<tr>
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<td>10mM x 1mL in DMSO, 5 mg, 10 mg, 50 mg, 100 mg</td>
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<table>
<thead>
<tr>
<th><strong>TPCA-1</strong></th>
<th><strong>Tel:</strong> 609-228-6898   <strong>Fax:</strong> 609-228-5909   <strong>Email:</strong> <a href="mailto:sales@MedChemExpress.com">sales@MedChemExpress.com</a></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cat. No.: HY-10074</strong></td>
<td><strong>Bioactivity:</strong></td>
</tr>
<tr>
<td>TPCA-1 is a potent and selective inhibitor of IKK-2 with IC\textsubscript{50} of 179 nM. TPCA-1 is a direct dual inhibitor of STAT3 and NF-κB.</td>
<td>TPCA-1 is a potent and selective inhibitor of IKK-2 with IC\textsubscript{50} of 179 nM.</td>
</tr>
<tr>
<td><strong>Purity:</strong></td>
<td><strong>Purity:</strong></td>
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<td>99.54%</td>
<td>99.54%</td>
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<tr>
<td><strong>Clinical Data:</strong></td>
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<td>No Development Reported</td>
<td>No Development Reported</td>
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<tr>
<td><strong>Size:</strong></td>
<td><strong>Size:</strong></td>
</tr>
<tr>
<td>10mM x 1mL in DMSO, 5 mg, 10 mg, 100 mg</td>
<td>10mM x 1mL in DMSO, 5 mg, 10 mg, 100 mg</td>
</tr>
</tbody>
</table>

**Bioactivity:**
LY2409881 trihydrochloride is a selective IκB kinase β (IKK2) inhibitor with an IC\textsubscript{50} of 30 nM.
MLN120B (ML120B) is a specific, ATP competitive IKKβ inhibitor with an IC\textsubscript{50} of 60 nM.
MLN120B is a specific, ATP competitive IKKβ inhibitor with an IC\textsubscript{50} of 60 nM.
MRT67307 is a dual inhibitor of the IKKε and TBK-1 with IC\textsubscript{50} of 160 and 19 nM, respectively. MRT67307 also inhibits ULK1 and ULK2 with IC\textsubscript{50} of 45 and 38 nM, respectively.
PS-1145 is an IκB kinase (IKK) inhibitor with an IC\textsubscript{50} of 88 nM.
TBK1/IKKε-IN-1 is a dual TBK1 and IKKε inhibitor extracted from patent US20160376283 A1, Compound 274 in Example 60, has IC\textsubscript{50} values of <100 nM.
TBK1/IKKε-IN-2 is a dual TBK1 and IKKε inhibitor.
TBK1/IKKε-IN-5 (compound 1) is a dual TBK1 and IKKε inhibitor, with IC\textsubscript{50} values of 1 nM and 5.6 nM for TBK1 and IKKε, respectively.
TPCA-1 is a potent and selective inhibitor of IKK-2 with IC\textsubscript{50} of 179 nM. TPCA-1 is a direct dual inhibitor of STAT3 and NF-κB.
Keap1-Nrf2 is the major regulator of cytoprotective responses to oxidative and electrophilic stress. Kelch-like ECH-associated protein 1 is a protein that in humans is encoded by the Keap1 gene. Keap1 has been shown to interact with Nrf2, a master regulator of the antioxidant response, which is important for the amelioration of oxidative stress. Under quiescent conditions, Nrf2 is anchored in the cytoplasm through binding to Keap1, which, in turn, facilitates the ubiquitination and subsequent proteolysis of Nrf2. Such sequestration and further degradation of Nrf2 in the cytoplasm are mechanisms for the repressive effects of Keap1 on Nrf2. Because Nrf2 activation leads to a coordinated antioxidant and anti-inflammatory response, and Keap1 represses Nrf2 activation, Keap1 has become a very attractive drug target.
Keap1-Nrf2 Inhibitors & Modulators

(+)-DHMEQ (1R,2R,6R)-Dehydroxymethylepoxyquinomicin; (1R,2R,6R)-DHMEQ

Bioactivity: (+)-DHMEQ is an activator of antioxidant transcription factor Nrf2. (+)-DHMEQ is the enantiomer of (-)-DHMEQ. (-)-DHMEQ inhibits NF-kB than its enantiomer (+)-DHMEQ.

Purity: 99.65%
Clinical Data: No Development Reported
Size: 10mM x 1mL in DMSO, 2 mg, 5 mg, 10 mg, 25 mg

4-Hydroxyphenylacetic acid

Bioactivity: 4-hydroxyphenylacetic acid, a major microbiota-derived metabolite of polyphenols, is involved in the antioxidative action. 4-hydroxyphenylacetic acid induces expression of Nrf2.

Purity: 98.0%
Clinical Data: No Development Reported
Size: 10mM x 1mL in DMSO, 100 mg

4-Octyl Itaconate

Bioactivity: 4-Octyl Itaconate is a cell-permeable Itaconate derivative. Itaconate is an anti-inflammatory metabolite that activates Nrf2 via alkylation of KEAP1.

Purity: 99.64%
Clinical Data: No Development Reported
Size: 10mM x 1mL in DMSO, 50 mg, 100 mg, 200 mg, 500 mg

Bardoxolone (CDDO; RTA 401)

Bioactivity: Bardoxolone is a novel nuclear regulator factor (Nrf-2) activator.

Purity: 99.14%
Clinical Data: Phase 3
Size: 10mM x 1mL in DMSO, 5 mg, 10 mg, 50 mg, 100 mg

Astilbin

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

Bardoxolone methyl (NSC 713200; RTA 402; CDDO Methyl ester)

Bioactivity: Bardoxolone methyl (NSC 713200; RTA 402; CDDO Methyl ester) is a synthetic triterpenoid compound with potential antineoplastic and anti-inflammatory activities, acting as an activator of the Nrf2 pathway and an inhibitor of the NF-κB pathway.

Purity: 99.72%
Clinical Data: Phase 3
Size: 10mM x 1mL in DMSO, 10 mg, 50 mg, 100 mg, 200 mg, 500 mg

Brusatol (NSC 172924; (+)-Brusatol)

Bioactivity: Brusatol (NSC 172924), isolated from the Brucea javanica plant, inhibits Nrf2.

Purity: 99.89%
Clinical Data: No Development Reported
Size: 5 mg, 10 mg

CDDO-EA (CDDO ethyl amide; TP319; RTA 405)

Bioactivity: CDDO-EA is an NF-E2 related factor 2/antioxidant response element (Nrf2/ARE) activator.

Purity: 99.32%
Clinical Data: No Development Reported
Size: 10mM x 1mL in DMSO, 5 mg, 10 mg, 50 mg, 100 mg

Curcumin (Turmeric yellow; Natural Yellow 3; Diferuloylmethane)

Bioactivity: Curcumin (Turmeric yellow) is a natural phenolic compound with diverse pharmacologic effects including anti-inflammatory, antioxidant, antiproliferative and antiangiogenic activities. Curcumin is an inhibitor of p300 histone acetyltransferase (HATs) and also shows inhibitory effects on NF-κB and...

Purity: 99.66%
Clinical Data: Phase 4
Size: 10mM x 1mL in DMSO, 100 mg, 500 mg
Danshensu (Dan shen suan A; Salvianic acid A)  
**Cat. No.:** HY-N1913  
**Bioactivity:** Danshensu, an active ingredient of Salvia miltiorrhiza, shows wide cardiovascular benefit by activating Nrf2 signaling pathway.  
**Purity:** 98.0%  
**Clinical Data:** No Development Reported  
**Size:** 10mM x 1mL in Water, 10 mg, 50 mg, 100 mg  

Dimethyl fumarate (DMF)  
**Cat. No.:** HY-17363  
**Bioactivity:** Dimethyl fumarate is a nuclear factor (erythroid-derived)-like 2 (Nrf2) pathway activator and induces upregulation of antioxidant gene expression.  
**Purity:** 98.0%  
**Clinical Data:** Launched  
**Size:** 10mM x 1mL in DMSO, 5 g  

Eriodictyol (Huazhongilexone)  
**Cat. No.:** HY-N0637  
**Bioactivity:** Eriodictyol is a flavonoid isolated from the Chinese herb, with antioxidant and anti-inflammatory activity. Eriodictyol induces Nrf2 signaling pathway.  
**Purity:** 99.98%  
**Clinical Data:** No Development Reported  
**Size:** 10mM x 1mL in DMSO, 5 mg  

Ginsenoside Rh3  
**Cat. No.:** HY-N0606  
**Bioactivity:** Ginsenoside Rh3 is a bacterial metabolite of Ginsenoside Rg5. Ginsenoside Rh3 treatment in human retinal cells induces Nrf2 activation.  
**Purity:** 98.0%  
**Clinical Data:** No Development Reported  
**Size:** 10mM x 1mL in DMSO, 5 mg, 10 mg  

Hesperin  
**Cat. No.:** HY-101371  
**Bioactivity:** Hesperin is a bioactive ingredient present in Japanese horseradish (wasabi) and has been shown to be an Nrf2 activator.  
**Purity:** 99.14%  
**Clinical Data:** No Development Reported  
**Size:** 10mM x 1mL in DMSO, 5 mg, 10 mg, 50 mg, 100 mg  

Hinokitiol (β-Thujaplicin)  
**Cat. No.:** HY-B2230  
**Bioactivity:** Hinokitiol is a component of essential oils isolated from Chymacyparis obtusa, reduces Nrf2 expression, and decreases DNMT1 and UHRF1 mRNA and protein expression, with anti-infective, anti-oxidative, and anti-tumor activities.  
**Purity:** 98.0%  
**Clinical Data:** No Development Reported  
**Size:** 10mM x 1mL in DMSO, 50 mg, 100 mg  

KI696  
**Cat. No.:** HY-101140  
**Bioactivity:** KI696 is a high affinity probe that disrupts the Keap1/NRF2 interaction.  
**Purity:** 99.72%  
**Clinical Data:** No Development Reported  
**Size:** 10mM x 1mL in DMSO, 1 mg, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg  

KI696 isomer  
**Cat. No.:** HY-101140A  
**Bioactivity:** KI696 isomer is the less active isomer of KI696. KI696 is a high affinity probe that disrupts the Keap1/NRF2 interaction.  
**Purity:** >98%  
**Clinical Data:** No Development Reported  
**Size:** 10mM x 1mL in DMSO, 1 mg, 5 mg, 10 mg, 25 mg  

Mangiferin  
**Cat. No.:** HY-N0290  
**Bioactivity:** Mangiferin is a Nrf2 activator. Mangiferin suppresses nuclear translocation of the NF-κB subunits p65 and p50.  
**Purity:** 99.84%  
**Clinical Data:** No Development Reported  
**Size:** 10mM x 1mL in DMSO, 10 mg, 50 mg, 100 mg  

Bioactivity: Danshensu, an active ingredient of Salvia miltiorrhiza, shows wide cardiovascular benefit by activating Nrf2 signaling pathway.  

Bioactivity: Dimethyl fumarate is a nuclear factor (erythroid-derived)-like 2 (Nrf2) pathway activator and induces upregulation of antioxidant gene expression.  

Bioactivity: Eriodictyol is a flavonoid isolated from the Chinese herb, with antioxidant and anti-inflammatory activity. Eriodictyol induces Nrf2 signaling pathway.  

Bioactivity: Ginsenoside Rh3 is a bacterial metabolite of Ginsenoside Rg5. Ginsenoside Rh3 treatment in human retinal cells induces Nrf2 activation.  

Bioactivity: Hesperin is a bioactive ingredient present in Japanese horseradish (wasabi) and has been shown to be an Nrf2 activator.  

Bioactivity: Hinokitiol is a component of essential oils isolated from Chymacyparis obtusa, reduces Nrf2 expression, and decreases DNMT1 and UHRF1 mRNA and protein expression, with anti-infective, anti-oxidative, and anti-tumor activities.  

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Bioactivity: Mangiferin is a Nrf2 activator. Mangiferin suppresses nuclear translocation of the NF-κB subunits p65 and p50.
| **Bioactivity** | **ML385** | **Cat. No.** HY-100523 |
|----------------|----------------------------------|
| Methyl 3,4-dihydroxybenzoate (Protocatechuic acid methyl ester; Methyl protocatechuate) is a major metabolite of antioxidant polyphenols found in green tea. Antioxidant and anti-inflammatory effect. |
| Purity: 97.00% | ML385 is a specific nuclear factor erythroid 2-related factor 2 (NRF2) inhibitor with an IC₅₀ of 1.9 μM. |
| Clinical Data: No Development Reported | Purity: 99.59% |
| Size: 10mM x 1mL in DMSO, 50 mg | Clinical Data: No Development Reported |
| | Size: 5 mg, 10 mg, 25 mg, 50 mg, 100 mg, 200 mg |

| **Bioactivity** | **NK-252** | **Cat. No.** HY-19734 |
|----------------|------------|
| NK-252 is a potential NRF2 activator, which exhibits a great NRF2-activating potential. |
| Clinical Data: No Development Reported | Purity: >98% |
| Size: 10mM x 1mL in DMSO, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg | Clinical Data: No Development Reported |
| | Size: 500 mg |

| **Bioactivity** | **Pyridoxine hydrochloride** (Pyridoxol hydrochloride; Vitamin B6 hydrochloride) | **Cat. No.** HY-N0682 |
|----------------|--------------------------------------------------------------------------------|
| Pyridoxine hydrochloride (Pyridoxol; Vitamin B6) is a pyridine derivative. Pyridoxine (Pyridoxol; Vitamin B6) exerts antioxidant effects in cell model of Alzheimer’s disease via the NRF2/HO-1 pathway. |
| Purity: 99.75% | Bioactivity: RTA-408 is an antioxidant inflammation modulator (AIM), which activates NRF2 and suppresses nitric oxide (NO). |
| Clinical Data: Launched | Purity: 98.96% |
| Size: 10mM x 1mL in Water, 100 mg | Clinical Data: Phase 2 |
| | Size: 10mM x 1mL in DMSO, 5 mg, 10 mg, 50 mg, 100 mg, 200 mg |

| **Bioactivity** | **TBHQ** (tert-Butylhydroquinone) | **Cat. No.** HY-100489 |
|----------------|----------------------------------|
| TBHQ is an antioxidant that activates NRF2. |
| Purity: 98.0% | Bioactivity: TBHQ is an antioxidant that activates NRF2. |
| Clinical Data: No Development Reported | Purity: 98.0% |
| Size: 10mM x 1mL in DMSO, 1 g | Clinical Data: No Development Reported |
| | Size: 10mM x 1mL in DMSO, 1 g |
MALT1
mucosa associated lymphoid tissue lymphoma translocation gene 1

MALT1 is a paracaspase, which is related to the caspase (cysteine-aspartic proteases) family of proteases but cleaves after Arg residues instead of Asp. MALT1 cleavage activity is linked to the pathogenesis of activated B cell-like diffuse large B cell lymphoma (ABC-DLBCL), a chemoresistant form of DLBCL. MALT1 is a unique paracaspase protein that transduces aberrant oncogenic signaling in ABC-DLBCL. MALT1 represents a potentially important therapeutic target for ABC-DLBCL and MALT lymphoma. MALT1 small molecule inhibitors might be useful chemical tools for studying MALT1 biology and treating MALT1-addicted tumors.
# MALT1 Inhibitors & Modulators

## MALT1 inhibitor MI-2

**Cat. No.: HY-12276**

**Bioactivity:** MALT1 inhibitor MI-2 is an irreversible MALT1 protease inhibitor with an \( IC_{50} \) of 5.84 \( \mu M \).

<table>
<thead>
<tr>
<th>Purity:</th>
<th>99.56%</th>
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<tbody>
<tr>
<td>Clinical Data:</td>
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</tr>
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<td>Size:</td>
<td>500 mg, 100 mg, 250 mg</td>
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</table>

## MLT-748

**Cat. No.: HY-115466**

**Bioactivity:** MLT-748 is a potent, selective and allosteric inhibitor of MALT1, binds MALT1 in the allosteric Trp580 pocket, with an \( IC_{50} \) of 5 nM [1].

<table>
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## MLT-747

**Cat. No.: HY-124587**

**Bioactivity:** MLT-747 is a potent, selective, allosteric inhibitor of MALT1, binds MALT1 in the allosteric Trp580 pocket, with an \( IC_{50} \) of 14 nM [1].

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---

**MALT1 Inhibitors & Modulators**

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**Tel: 609-228-6898  Fax: 609-228-5909  Email: sales@MedChemExpress.com**
NF-κB (Nuclear factor kappa-light-chain-enhancer of activated B cells) is a protein complex that controls transcription of DNA. NF-κB is found in almost all animal cell types and is involved in cellular responses to stimuli such as stress, cytokines, free radicals, ultraviolet irradiation, oxidized LDL, and bacterial or viral antigens. NF-κB plays a key role in regulating the immune response to infection. Incorrect regulation of NF-κB has been linked to cancer, inflammatory, and autoimmune diseases, septic shock, viral infection, and improper immune development. NF-κB has also been implicated in processes of synaptic plasticity and memory. There are five proteins in the mammalian NF-κB family: NF-κB1, NF-κB2, RelA, RelB, c-Rel.
NF-κB Inhibitors & Modulators

(-)-DHMEQ
(Dehydroxymethylepoxyquinomicin)
Cat. No.: HY-14645

Bioactivity: (-)-DHMEQ is a potent NF-κB inhibitor.

Purity: 97.46%
Clinical Data: No Development Reported
Size: 10mM x 1mL in DMSO, 2 mg, 5 mg, 10 mg, 25 mg

(R)-(-)-Ibuprofen
((R)-Ibuprofen)
Cat. No.: HY-78131B

Bioactivity: (R)-(-)-Ibuprofen is the R enantiomer of Ibuprofen, inactive on COX, inhibits NF-κB activation; (R)-(-)-Ibuprofen exhibits anti-inflammatory and antinociceptive effects.

Purity: 99.91%
Clinical Data: No Development Reported
Size: 10mM x 1mL in DMSO, 200 mg

14-Deoxy-11,12-didehydroandrographolide
(14-dehydro Andrographolide; AP10)
Cat. No.: HY-N1490

Bioactivity: 14-Deoxy-11,12-didehydroandrographolide is an analogue of Andrographolide that can be isolated from A. paniculata. 14-Deoxy-11,12-didehydroandrographolide inhibits NF-κB activation.

Purity: 98.0%
Clinical Data: Phase 1
Size: 10mM x 1mL in DMSO, 1 mg, 5 mg, 10 mg, 25 mg

4-O-Methyl honokiol
Cat. No.: HY-U00450

Bioactivity: 4-O-Methyl honokiol is a natural neolignan isolated from Magnolia officinalis, acts as a PPARγ agonist, and inhibits NF-κB activity, used for cancer and inflammation research.

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

5-Aminosalicylic Acid
(Mesalamine; 5-ASA; Mesalazine)
Cat. No.: HY-15027

Bioactivity: 5-Aminosalicylic acid acts as a specific PPARγ agonist and also inhibits p21-activated kinase 1 (PAK1) and NF-κB.

Purity: 98.0%
Clinical Data: Launched
Size: 10mM x 1mL in DMSO, 10 g

Ac2-26
Cat. No.: HY-P1098


Purity: >98%
Clinical Data: No Development Reported
Size: 500 µg, 1 mg, 5 mg

Aconine
(Jesaconine)
Cat. No.: HY-N0277

Bioactivity: Aconine inhibits receptor activator of nuclear factor (NF)-κB ligand (RANKL)-induced NF-κB activation.

Purity: 99.23%
Clinical Data: No Development Reported
Size: 10mM x 1mL in DMSO, 5 mg, 10 mg

Adelmidrol
Cat. No.: HY-81026

Bioactivity: Adelmidrol exerts important anti-inflammatory effects that are partly dependent on PPARγ. Adelmidrol reduces NF-κB translocation, and COX-2 expression.

Purity: 98.0%
Clinical Data: Phase 3
Size: 10mM x 1mL in DMSO, 100 mg

Andrographolide
(Andrographis)
Cat. No.: HY-N0191

Bioactivity: Andrographolide is a NF-κB inhibitor, which inhibits NF-κB activation through covalent modification of a cysteine residue on p50 in endothelial cells without affecting IκBα degradation or p50/p65 nuclear translocation.

Purity: 97.46%
Clinical Data: Phase 4
Size: 10mM x 1mL in DMSO, 100 mg, 500 mg
Aristolochic acid A  
(Aristolochic acid I; TR 1736)  
Cat. No.: HY-N0510

Bioactivity: Aristolochic acid A (Aristolochic acid I) is the main component of plant extract Aristolochic acids, which are found in various herbal plants of genus Aristolochia and Asarum. AAI significantly reduces both activator protein 1 (AP-1) and NF-κB activities. Aristolochic acid A reduces BLCAP gene...

Purity: 99.98%
Clinical Data: No Development Reported
Size: 10mM x 1mL in DMSO, 10 mg, 25 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: 10mM x 1mL in DMSO, 10 mg, 25 mg, 50 mg, 100 mg

Baicalin  
(Baicalin 7-O-β-D-glucuronide)  
Cat. No.: HY-N0197

Bioactivity: Baicalin is a flavonoid glycoside isolated from Scutellaria baicalensis. Baicalin reduces the expression of NF-κB.

Purity: 98.01%
Clinical Data: No Development Reported
Size: 10mM x 1mL in DMSO, 100 mg, 500 mg, 1 g, 5 g

Barlerin  
(8-O-Acetyl shanzhiside methyl ester)  
Cat. No.: HY-N0758

Bioactivity: Barlerin (8-O-Acetyl shanzhiside methyl ester) is an iridoid glucoside isolated from the leaves of Lamiophlomis rotata Kudo, a Chinese folk medicinal plant in Xi-zang. Barlerin (8-O-Acetyl shanzhiside methyl ester) could inhibit NF-κB.

Purity: 98.52%
Clinical Data: No Development Reported
Size: 10mM x 1mL in DMSO, 5 mg, 10 mg, 25 mg, 50 mg

BAY 11-7082  
(BAY 11-7821)  
Cat. No.: HY-13453

Bioactivity: BAY 11-7082 is a NF-κB inhibitor which decreases NF-κB by inhibiting TNF-α-induced phosphorylation of IκB-α. BAY 11-7082 inhibits ubiquitin-specific protease USP7 and USP21 with IC₅₀ of 0.19 μM and 0.96 μM, respectively.

Purity: 99.42%
Clinical Data: No Development Reported
Size: 10mM x 1mL in DMSO, 5 mg, 10 mg, 50 mg, 100 mg

BAY 11-7085  
(BAY 11-7083)  
Cat. No.: HY-10257

Bioactivity: BAY 11-7085 is an inhibitor of NF-κB activation and phosphorylation of IκBα; it stabilizes IκBα with an IC₅₀ of 10 μM.

Purity: 99.98%
Clinical Data: No Development Reported
Size: 10mM x 1mL in DMSO, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

Berbamine dihydrochloride  
Cat. No.: HY-N0714A

Bioactivity: Berbamine dihydrochloride is an inhibitor of NF-κB activity with remarkable anti-myeloma efficacy.

Purity: 95.98%
Clinical Data: No Development Reported
Size: 10mM x 1mL in DMSO, 200 mg, 500 mg

Caffeic acid phenethyl ester  
Cat. No.: HY-N0274

Bioactivity: Caffeic acid phenethyl ester is a NF-κB inhibitor.

Purity: 99.67%
Clinical Data: No Development Reported
Size: 10mM x 1mL in DMSO, 5 mg, 10 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 EC₅₀ 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

Chelidonic acid  
Cat. No.: HY-W041489

Bioactivity: Chelidonic acid is a component of Chelidonium majus L. used as a mild analgesic, an antimicrobial, an acentral 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...

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

www.MedChemExpress.com
### CID-2858522

**Cat. No.: HY-15530**

**Bioactivity:** CID-2858522 is a highly potent and selective antigen receptor-mediated NF-κB activation inhibitor with an IC₅₀ of 70 nM.

**Purity:** 96.57%

**Clinical Data:** No Development Reported

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

---

### Cyclo(his-pro)

**Cat. No.: HY-101402**

**Bioactivity:** Cyclo(his-pro) is a cyclic dipeptide structurally related to thyrotropin-releasing hormone. Cyclo(His-Pro) could inhibit NF-κB nuclear accumulation.

**Purity:** 99.41%

**Clinical Data:** No Development Reported

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

---

### Cynaropicrin

**Cat. No.: HY-N2350**

**Bioactivity:** Cynaropicrin is a sesquiterpene lactone which can inhibit tumor necrosis factor (TNF-α) release with an IC₅₀ of 8.24 nM.

**Purity:** >98%

**Clinical Data:** No Development Reported

**Size:** 5 mg, 10 mg

---

### Dendrophenol

**Cat. No.: HY-N6031**

**Bioactivity:** Dendrophenol, isolated from the stem of Dendrobium loddigesii Rolfe, act as a NF-κB inhibitor [1]. Antineoplastic activity [1].

**Purity:** >98%

**Clinical Data:** No Development Reported

**Size:** 5 mg

---

### DHMEQ racemate (rel-DHMEQ)

**Cat. No.: HY-14645B**

**Bioactivity:** DHMEQ racemate is a NF-κB inhibitor. DHMEQ racemate is less active than (-)-DHMEQ.

**Purity:** >98%

**Clinical Data:** No Development Reported

**Size:** 2 mg, 5 mg

---

### Dihydroartemisinin (Dihydroqinghaosu; β-Dihydroartemisinin; Artenimol)

**Cat. No.: HY-N0176**

**Bioactivity:** Dihydroartemisinin is a potent anti-malaria agent.

**Purity:** 99.03%

**Clinical Data:** Phase 4

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

---

### DMAPT (Dimethylamino Parthenolide)

**Cat. No.: HY-16172**

**Bioactivity:** DMAPT (Dimethylamino Parthenolide), a water soluble analogue of Parthenolide (PTL), is an oral active NF-κB inhibitor, with a LD₅₀ of 1.7 μM for cell population in AML cells. Has potential anti-cancer and anti-metastatic effect [1].

**Purity:** >98%

**Clinical Data:** No Development Reported

**Size:** 5 mg

---

### Edasalonexent

**Cat. No.: HY-17630**

**Bioactivity:** Edasalonexent is an orally bioavailable NF-κB inhibitor.

**Purity:** 98.00%

**Clinical Data:** No Development Reported

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

---

### Engeletin

**Cat. No.: HY-N0436**

**Bioactivity:** Engeletin is a flavanonol glycoside isolated from hymenaea martiana, inhibits NF-κB signaling-pathway activation, and possesses anti-inflammatory, analgesic, diuresis, detumescence, and antibiosis effects.

**Purity:** 98.88%

**Clinical Data:** No Development Reported

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

---

### Erdosteine

**Cat. No.: HY-B0289**

**Bioactivity:** Erdosteine inhibits lipopolysaccharide (LPS)-induced NF-κB activation.

**Purity:** 99.46%

**Clinical Data:** Launched

**Size:** 10mM x 1mL in DMSO, 1 g, 5 g
<table>
<thead>
<tr>
<th>Bioactivity</th>
<th>Flaconitine is isolated from the ammonium hydroxide wetted root of <em>A. szchyanzianum</em> Gay. Flaconitine is considered to be a NF-κB inhibitor.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purity</td>
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</tr>
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<tr>
<th>Bioactivity</th>
<th>Forsythoside B is a phelythenoid glycoside isolated from the leaves of <em>Lamipholmis rotata</em> Kudo, a Chinese folk medicinal plant for treating inflammatory diseases and promoting blood circulation. Forsythoside B could inhibit TNF-α, IL-6, IκB and modulate NF-κB.</th>
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</table>
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 IC_{50} of 29.34±2.22 μM in HepG2 cells. Ginsenoside Rg6 also exhibits apoptosis-inducing effect.

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

Ginsenoside Rk3
Cat. No.: HY-N0906

Bioactivity: Ginsenoside Rk3 is present in the roots Panax notoginseng herbs. Ginsenoside Rk3 significantly inhibits TNF-α-induced NF-κB transcriptional activity, with an IC_{50} of 14.24±1.30 μM in HepG2 cells.

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

Guaiacol
(2-Methoxyphenol)
Cat. No.: HY-N1380

Bioactivity: Guaiacol, a phenolic compound isolated from Guaiac resin, inhibits LPS-stimulated COX-2 expression and NF-κB activation [1]. Anti-inflammatory activity [2].

Purity: 99.29%
Clinical Data: Launched
Size: 10mM x 1mL in DMSO, 100 mg

Homoplectaginin
Cat. No.: HY-N1949

Bioactivity: Homoplectaginin is a flavonoid from a traditional Chinese medicine Salvia plebeia with antiinflammatory and antioxidant properties. Homoplectaginin 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

IKKγ NBD Inhibitory Peptide
Cat. No.: HY-P1847

Bioactivity: IKKγ NBD Inhibitory Peptide is a NEMO-binding domain peptide (NBD peptide) corresponding to the NEMO amino-terminal alpha-helical region, which is shown to block TNF-alpha-induced NF-kB activation [1].

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

Inulicin
(1-O-Acetylbritannilactone)
Cat. No.: HY-N0896

Bioactivity: Inulicin (1-O-Acetylbritannilactone) is an active compound isolated from Inula Britannica L. Inulicin (1-O-Acetylbritannilactone) inhibits VEGF-mediated activation of Src and FAK. Inulicin (1-O-Acetylbritannilactone) inhibits LPS-induced PGE2 production and COX-2 expression,...

Purity: 99.38%
Clinical Data: No Development Reported
Size: 10mM x 1mL in DMSO, 5 mg, 10 mg

Indole-3-carbinol
(3-Indolemethanol)
Cat. No.: HY-N0170

Bioactivity: Indole-3-carbinol (I3C) inhibits activity and also is an Aryl hydrocarbon receptor (AhR) agonist, and an inhibitor of WWP1 (WW domain-containing ubiquitin E3 ligase 1).

Purity: 98.0%
Clinical Data: Phase 2
Size: 10mM x 1mL in DMSO, 200 mg, 1 g

Isovitexin
(Saponaretin; Homovitexin)
Cat. No.: HY-N0773

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

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

JSH-23
Cat. No.: HY-13982

Bioactivity: JSH-23 is an NF-κB inhibitor which inhibits NF-κB transcriptional activity with an IC_{50} of 7.1 μM.

Purity: 99.48%
Clinical Data: No Development Reported
Size: 10mM x 1mL in DMSO, 5 mg, 10 mg

Laquinimod
(ABR-215062)
Cat. No.: HY-13010

Bioactivity: Laquinimod is a potent immunomodulator which prevents neurodegeneration and inflammation in the central nervous system.

Purity: 99.84%
Clinical Data: Phase 3
Size: 10mM x 1mL in DMSO, 5 mg, 10 mg, 50 mg, 100 mg, 500 mg
<table>
<thead>
<tr>
<th>Name</th>
<th>Cat. No.</th>
<th>Bioactivity</th>
<th>Purity</th>
<th>Clinical Data</th>
<th>Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mangiferin</td>
<td>HY-N0290</td>
<td>Mangoferin is a Nrf2 activator. Mangoferin suppresses nuclear translocation of the NF-κB subunits p65 and p50.</td>
<td>&gt;98.4%</td>
<td>No Development Reported</td>
<td>10mM x 1mL in DMSO, 10 mg, 50 mg, 100 mg</td>
</tr>
<tr>
<td>Maslinic acid</td>
<td>HY-N0629</td>
<td>Maslinic acid can inhibit the DNA-binding activity of NF-κB p65 and abolish the phosphorylation of IκB-α, which is required for p65 activation.</td>
<td>98.0%</td>
<td>No Development Reported</td>
<td>10mM x 1mL in DMSO, 5 mg, 10 mg, 25 mg</td>
</tr>
<tr>
<td>Methylthiouacil (MTU)</td>
<td>HY-B0513</td>
<td>Methylthiouacil is an antithyroid agent. Methylthiouacil suppresses the production of TNF-α and IL-6, and the activation of NF-κB and ERK1/2.</td>
<td>98.0%</td>
<td>Launched</td>
<td>10mM x 1mL in DMSO, 50 mg, 100 mg</td>
</tr>
<tr>
<td>Morusin (Mulberrochromene)</td>
<td>HY-N0622</td>
<td>Morusin is a prenylated flavonoid isolated from M. australis with various biological activities, such as antitumor, antioxidant, and anti-bacteria property. Morusin could inhibit NF-κB and STAT3 activity.</td>
<td>99.08%</td>
<td>No Development Reported</td>
<td>10mM x 1mL in DMSO, 2 mg, 5 mg, 10 mg, 25 mg</td>
</tr>
<tr>
<td>Naringin Dihydrochalcone</td>
<td>HY-N0319</td>
<td>Naringin Dihydrochalcone is an artificial sweetener derived from naringin. Naringin is a major flavanone glycoside obtained from tomatoes, grapefruits, and many other citrus fruits. Naringin exhibits biological properties such as antioxidant, anti-inflammatory, and antiapoptotic activities...</td>
<td>99.63%</td>
<td>No Development Reported</td>
<td>10mM x 1mL in DMSO, 100 mg, 500 mg, 1 g, 5 g</td>
</tr>
<tr>
<td>Neferine ((-)-Neferine)</td>
<td>HY-N0441</td>
<td>Neferine is a major bisbenzylisoquinoline alkaloid. Neferine strongly inhibits NF-κB activation.</td>
<td>99.92%</td>
<td>No Development Reported</td>
<td>10mM x 1mL in DMSO, 5 mg, 10 mg, 25 mg, 50 mg</td>
</tr>
<tr>
<td>Neochlorogenic acid</td>
<td>HY-N0722</td>
<td>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 suppresses iNOS and COX-2 protein expression. Neochlorogenic acid also inhibits phosphorylated NF-κB p65 and p38 MAPK...</td>
<td>99.46%</td>
<td>No Development Reported</td>
<td>10mM x 1mL in DMSO, 5 mg, 10 mg</td>
</tr>
<tr>
<td>Nimbolide</td>
<td>HY-116035</td>
<td>Nimbolide is a triterpene derived from the leaves and flowers of neem (Azadirachta indica). Nimbolide induces apoptosis through inactivation of NF-κB. Nimbolide inhibits CDK4/CDK6 kinase activity. Nimbolide suppresses the NF-κB, Wnt, PI3K-Akt, MAPK and JAK-STAT signaling pathways...</td>
<td>&gt;98%</td>
<td>No Development Reported</td>
<td></td>
</tr>
</tbody>
</table>
| **Oxaprozin**  
(Oxaprozinum; Wy21743) | **Parthenolide**  
((-)-Parthenolide) |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bioactivity:</strong> Oxaprozin is an inhibitor of both COX-1 and COX-2 with IC&lt;sub&gt;50&lt;/sub&gt; of 2.2 μM and 36 μM for human platelet COX-1 and IL-1-stimulated human synovial cell COX-2, respectively. Oxaprozin also inhibits the activation of NF-κB.</td>
<td><strong>Bioactivity:</strong> Parthenolide is a sesquiterpene lactone found in the medicinal herb Feverfew. Parthenolide exhibits anti-inflammatory activity by inhibiting NF-κB activation; also inhibits HDAC1 protein without affecting other class I/II HDACs.</td>
</tr>
</tbody>
</table>
| **Purity:** 99.63%  
**Clinical Data:** No Development Reported  
**Size:** 10mM x 1mL in DMSO, 10 mg, 50 mg, 100 mg | **Purity:** 99.88%  
**Clinical Data:** Phase 2  
**Size:** 10mM x 1mL in DMSO, 50 mg, 100 mg, 200 mg |

| **Pentosan Polysulfate** | **Pyrrolidinedithiocarbamate ammonium**  
(Ammonium pyrrolidinedithiocarbamate; APDC; …) |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bioactivity:</strong> Pentosan Polysulfate is a semi-synthetic drug used to treat various medical conditions including thrombi and interstitial cystitis.</td>
<td><strong>Bioactivity:</strong> Pyrrolidinedithiocarbamate ammonium is a selective NF-κB inhibitor.</td>
</tr>
</tbody>
</table>
| **Purity:** 98.0%  
**Clinical Data:** Launched  
**Size:** 100 mg | **Purity:** 99.86%  
**Clinical Data:** Phase 3  
**Size:** 10mM x 1mL in DMSO, 100 mg |

| **QNZ**  
(EVP4593) | **Rocaglamide**  
(Rocaglamide A; Roc-A) |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bioactivity:</strong> QNZ (EVP4593) shows strong inhibitory effects on NF-κB transcriptional activation and TNF-α production with IC&lt;sub&gt;50&lt;/sub&gt; of 11 and 7 nM, respectively. QNZ (EVP4593) is a neuroprotective inhibitor of SOC channel.</td>
<td><strong>Bioactivity:</strong> Rocaglamide is a potent NF-κB activation inhibitor.</td>
</tr>
</tbody>
</table>
| **Purity:** 98.46%  
**Clinical Data:** No Development Reported  
**Size:** 10mM x 1mL in DMSO, 5 mg, 10 mg, 50 mg | **Purity:** 96.43%  
**Clinical Data:** No Development Reported  
**Size:** 200μg, 1 mg, 5 mg, 10 mg, 25 mg |

| **Saikosaponin D**  
(Cat. No.: HY-N0250) | **Sarsasapogenin**  
(Parigenin; Sarsagenin)  
(Cat. No.: HY-N0073) |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bioactivity:</strong> Saikosaponin D is a triterpene saponin isolated from Bupleurum, with anti-inflammatory, anti-bacterial, anti-tumor, and anti-allergic activities; Saikosaponin D inhibits selectin, STAT3 and NF-κB and activates estrogen receptor-β.</td>
<td><strong>Bioactivity:</strong> Sarsasapogenin is a sapogenin from the Chinese medical herb Anemarrhena asphodeloides Bunge, with antidiabetic, anti-oxidative, anticancer and anti-inflammatory activities.</td>
</tr>
</tbody>
</table>
| **Purity:** 98.0%  
**Clinical Data:** No Development Reported  
**Size:** 10mM x 1mL in DMSO, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg | **Purity:** 99.20%  
**Clinical Data:** No Development Reported  
**Size:** 10mM x 1mL in DMSO, 25 mg, 50 mg, 100 mg |

| **Schisantherin A**  
(Gomisin-C; Schizantherin-A; Wuweizi ester-A) | **Shikonin**  
(C.I. 75535; Isoarnebin 4)  
(Cat. No.: HY-N0694)  
(Cat. No.: HY-N0822) |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bioactivity:</strong> Schisantherin A is a dibenzocyclooctadiene lignan isolated from the fruit of Schisandra sphenanthera. Schisantherin A inhibits p65-NF-κB translocation into the nucleus by IκBα degradation.</td>
<td><strong>Bioactivity:</strong> 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.</td>
</tr>
</tbody>
</table>
| **Purity:** 99.69%  
**Clinical Data:** No Development Reported  
**Size:** 10mM x 1mL in DMSO, 10 mg, 50 mg | **Purity:** 99.80%  
**Clinical Data:** No Development Reported  
**Size:** 10mM x 1mL in DMSO, 10 mg, 25 mg, 50 mg, 100 mg |
### Sinomenine hydrochloride
(Cucoline hydrochloride)
Cat. No.: HY-15122A

**Bioactivity:** Sinomenine hydrochloride is a blocker of the NF-κB activation and also an activator of μ-opioid receptor.

<table>
<thead>
<tr>
<th>Purity:</th>
<th>98.0%</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, 100 mg</td>
</tr>
</tbody>
</table>

### SN50
Cat. No.: HY-P0151

**Bioactivity:** SN50 is a cell permeable inhibitor of NF-κB translocation.

<table>
<thead>
<tr>
<th>Purity:</th>
<th>97.81%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinical Data:</td>
<td>No Development Reported</td>
</tr>
<tr>
<td>Size:</td>
<td>1 mg, 5 mg</td>
</tr>
</tbody>
</table>

### Stachydrine
Cat. No.: HY-N0298

**Bioactivity:** Stachydrine is a major constituent of Chinese herb Leonurus heterophyllus sweet used to promote blood circulation and disperse blood stasis. Stachydrine can inhibit the NF-κB signal pathway.

<table>
<thead>
<tr>
<th>Purity:</th>
<th>98.0%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinical Data:</td>
<td>No Development Reported</td>
</tr>
<tr>
<td>Size:</td>
<td>10mM x 1mL in Water, 10 mg, 50 mg, 100 mg</td>
</tr>
</tbody>
</table>

### Stachydrine hydrochloride
Cat. No.: HY-N0738

**Bioactivity:** Stachydrine hydrochloride is the major active constituent of Herba Leonuri, which is a potential therapy for cardiovascular diseases [1]. Stachydrine can inhibit the NF-κB signal pathway. Anti-hypertropic activities [1].

<table>
<thead>
<tr>
<th>Purity:</th>
<th>98.0%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinical Data:</td>
<td>No Development Reported</td>
</tr>
<tr>
<td>Size:</td>
<td>10mM x 1mL in Water, 100 mg</td>
</tr>
</tbody>
</table>

### Sulfasalazine
(NSC 667219)
Cat. No.: HY-14655

**Bioactivity:** Sulfasalazine is a drug for the treatment of rheumatoid arthritis and ulcerative colitis. Sulfasalazine is reported to suppress NF-κB activity.

<table>
<thead>
<tr>
<th>Purity:</th>
<th>99.42%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinical Data:</td>
<td>Launched</td>
</tr>
<tr>
<td>Size:</td>
<td>10mM x 1mL in DMSO, 1 g, 5 g</td>
</tr>
</tbody>
</table>

### Tectochrysin
(Techtochrysin; NSC 80687)
Cat. No.: HY-134592

**Bioactivity:** Tectochrysin (Techtochrysin) is one of the major flavonoids of Alpinia oxyphylla Miquel. Tectochrysin (Techtochrysin) inhibits activity of NF-κB.

<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</td>
</tr>
</tbody>
</table>

### Tomatidine
Cat. No.: HY-N2149

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

<table>
<thead>
<tr>
<th>Purity:</th>
<th>98.0%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinical Data:</td>
<td>No Development Reported</td>
</tr>
<tr>
<td>Size:</td>
<td>25 mg, 50 mg, 100 mg</td>
</tr>
</tbody>
</table>

### TPCA-1
Cat. No.: HY-10074

**Bioactivity:** TPCA-1 is a potent and selective inhibitor of IKK-2 with IC$_{50}$ of 17.9 nM. TPCA-1 is a direct dual inhibitor of STAT3 and NF-κB.

<table>
<thead>
<tr>
<th>Purity:</th>
<th>99.54%</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, 100 mg</td>
</tr>
</tbody>
</table>

### Triphala
Cat. No.: HY-11435

**Bioactivity:** Triphala, an Ayurvedic polyherbal formulation comprising of equiproportional fruit parts of Terminalia chebula, Terminaliabelleric, and Phyllanthus emblica [1]. Triphala inhibits NF-κB activation. Triphala exerts antifungal<... |

<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>50 mg</td>
</tr>
</tbody>
</table>

### Triptolide
(PG490)
Cat. No.: HY-32735

**Bioactivity:** Triptolide is a diterpenoid triepoxide extracted from the root of Tripterygium wilfordii with immunosuppressive, anti-inflammatory and antiproliferative effects. Triptolide is a NF-κB activation inhibitor.

<table>
<thead>
<tr>
<th>Purity:</th>
<th>99.83%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinical Data:</td>
<td>Phase 3</td>
</tr>
<tr>
<td>Size:</td>
<td>10mM x 1mL in DMSO, 2 mg, 5 mg, 10 mg, 25 mg, 100 mg</td>
</tr>
<tr>
<td>Product</td>
<td>Cat. No.</td>
</tr>
<tr>
<td>-----------</td>
<td>---------</td>
</tr>
<tr>
<td>Tyrosol</td>
<td>HY-N0474</td>
</tr>
<tr>
<td>Vanillic acid</td>
<td>HY-N0708</td>
</tr>
<tr>
<td>WAY-204688 (SIM-688)</td>
<td>HY-19498</td>
</tr>
<tr>
<td>Withaferin A</td>
<td>HY-N2065</td>
</tr>
<tr>
<td>Yangonin</td>
<td>HY-N0919</td>
</tr>
<tr>
<td>Zingerone (Vanillylacetone; Gingerone)</td>
<td>HY-14621</td>
</tr>
<tr>
<td>α-Lipoic Acid (±)-α-Lipoic acid; DL-α-Lipoic acid; Thioctic acid</td>
<td>HY-N0492</td>
</tr>
</tbody>
</table>
Reactive Oxygen Species

HDAC Inhibitor: Vorinostat (SAHA)

HDAC (Histone deacetylase)
### Reactive Oxygen Species Inhibitors & Modulators

**(+)-α-Tocopherol**  
(D-α-Tocopherol; α-Vitamin E)  
*Cat. No.: HY-N0683*

**Bioactivity:** (+)-α-Tocopherol is a vitamin E derivative. Vitamin E is a fat-soluble antioxidant.

- **Purity:** 98.0%
- **Clinical Data:** No Development Reported
- **Size:** 10mM x 1mL in DMSO, 100 mg, 1 g

**(-)-Epigallocatechin Gallate**  
(EGCG; Epigallocatechol Gallate)  
*Cat. No.: HY-13653*

**Bioactivity:** (-)-Epigallocatechin Gallate is a tea flavonoid with potent antioxidant, antiinflammatory, and anticarcinogenic properties. (-)-Epigallocatechin Gallate is reported to inhibit EGFR signaling and thereby exert anticancer effects.

- **Purity:** 99.91%
- **Clinical Data:** Phase 4
- **Size:** 10mM x 1mL in DMSO, 100 mg, 100 mg

**(20S)-Protopanaxadiol**  
(20-Epiprotopanaxadiol; 20(S)-APPD)  
*Cat. No.: HY-N0797*

**Bioactivity:** (20S)-Protopanaxadiol (20-Epiprotopanaxadiol) is an aglycon metabolic derivative of the protopanaxadiol-type ginseng saponin; apoptosis inducer. IC50 value: Target: apoptosis inducer (20S)-Protopanaxadiol was used to induce cytotoxicity for two human glioma cell lines, SF188 and U87MG. For the...

- **Purity:** 98.0%
- **Clinical Data:** No Development Reported
- **Size:** 10mM x 1mL in DMSO, 10 mg, 50 mg

**1,3-Dicaffeoylquinic acid**  
(1,3-O-Dicaffeoylquinic acid; 1,5-Dicaffeoylquinic acid)  
*Cat. No.: HY-N1412*

**Bioactivity:** 1,3-Dicaffeoylquinic acid is a caffeoylquinic acid derivative that exhibits antioxidant activity and radical scavenging activity.

- **Purity:** 99.82%
- **Clinical Data:** No Development Reported
- **Size:** 10mM x 1mL in DMSO, 5 mg, 10 mg, 25 mg

**2-Phospho-L-ascorbic acid trisodium salt**  
(L-Ascorbic acid 2-phosphate trisodium salt; ...)  
*Cat. No.: HY-107837*

**Bioactivity:** 2-Phospho-L-ascorbic acid trisodium salt acts as an antioxidant and a stimulator of hepatocyte growth factor (HGF) production.

- **Purity:** 99.36%
- **Clinical Data:** No Development Reported
- **Size:** 10mM x 1mL in Water, 1 g

**3,5-Dicaffeoylquinic acid**  
(3,5-CQA; Isochlorogenic acid A)  
*Cat. No.: HY-N0056*

**Bioactivity:** 3,5-Dicaffeoylquinic acid is a natural phenolic acid with antioxidant and anti-inflammatory activities.

- **Purity:** 98.71%
- **Clinical Data:** No Development Reported
- **Size:** 10mM x 1mL in DMSO, 5 mg, 10 mg, 50 mg, 100 mg

**3-Indolepropionic acid**  
*Cat. No.: HY-W015229*

**Bioactivity:** 3-Indolepropionic acid is shown to be a powerful antioxidant and has potential in the treatment for Alzheimer’s disease.

- **Purity:** 98.0%
- **Clinical Data:** No Development Reported
- **Size:** 10mM x 1mL in DMSO, 1 g

**AKBA**  
(Acetyl-11-keto-β-boswellic acid)  
*Cat. No.: HY-N0892*

**Bioactivity:** Acetyl-11-Keto-β-Boswellic Acid (AKBA) is an active triterpenoid compound from the extract of Boswellia serrata; a novel Nrf2 activator. IC50 value: Target: Nrf2 activator in vitro: AKBA significantly reduced infarct volumes and apoptotic cells, and also increased neurologic scores by...

- **Purity:** 99.71%
- **Clinical Data:** No Development Reported
- **Size:** 10mM x 1mL in DMSO, 5 mg, 10 mg

**Albiflorin**  
*Cat. No.: HY-N0037*

**Bioactivity:** Albiflorin is a major constituent contained in peony root; possesses therapeutic potential for neurodegenerative diseases. IC50 value: Target: in vitro: Albiflorin significantly ameliorated Glu-induced reduction of cell viability, nuclear and mitochondrial apoptotic alteration,...

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

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24 | Tel: 609-228-6898 | Fax: 609-228-5909 | Email: sales@MedChemExpress.com
### Amentoflavone
**Cat. No.: HY-N0662**
**Bioactivity:** Amentoflavone is a natural biflavone compound with many biological properties, including anti-inflammatory, antioxidative, and neuroprotective effects. IC50 value: Target: In vitro: In irradiated v79 cells, Pretreatment with amentoflavone 24 hours prior to 8 Gy 60Co γ-ray irradiation...
**Purity:** 99.80%
**Clinical Data:** No Development Reported
**Size:** 10mM x 1mL in DMSO, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

### Ascorbyl palmitate
**Cat. No.: HY-80987**
**Bioactivity:** Ascorbyl palmitate is an ester formed from ascorbic acid and palmitic acid creating a fat-soluble form of vitamin C, it is also used as an antioxidant food additive.
**Purity:** 99.61%
**Clinical Data:** Launched
**Size:** 10mM x 1mL in DMSO, 100 mg, 200 mg, 500 mg

### Apigenin 7-glucoside
**Cat. No.: HY-N0578**
**Bioactivity:** Apigenin-7-glucoside exhibits significant anti-proliferative and antioxidant activity, scavengers of ROS. In vitro: exhibits significant anti-proliferative activity against B16F10 melanoma cells after 24 and 48 h of incubation. Apigenin-7-glucoside provoks an increase of subG0/G1, S and...
**Purity:** 99.88%
**Clinical Data:** No Development Reported
**Size:** 10mM x 1mL in DMSO, 2 mg, 5 mg, 10 mg, 25 mg, 50 mg

### Asiaticoside
**Cat. No.: HY-N0439**
**Bioactivity:** Asiaticoside, a trisaccharide triterpene from Centella asiatica, suppresses TGF-β/Smad signaling through inducing Smad7 and inhibiting TGF-βRI and TGF-βRII in keloid fibroblasts. Asiaticoside shows antioxidant, anti-inflammatory, and anti-ulcer properties.
**Purity:** 98.46%
**Clinical Data:** No Development Reported
**Size:** 10mM x 1mL in DMSO, 10 mg, 50 mg, 100 mg

### Astaxanthin
**Cat. No.: HY-82163**
**Bioactivity:** Astaxanthin, a red dietary carotenoid isolated from Haematococcus pluvialis, is an inhibitor of PPARγ and a potent antioxidant with antiinflammatory, neuroprotective and anti-inflammatory activity. Astaxanthin has potential in the treatment of various diseases, such as cancers and...
**Purity:** 98.0%
**Clinical Data:** Launched
**Size:** 5 mg, 10 mg

### Benfotiamine
**Cat. No.: HY-17374**
**Bioactivity:** Benfotiamine is a synthetic S-acyl derivative of thiamine (vitamin B1); an antioxidant dietary supplement. IC50 value: Target: Benfotiamine, the lipid-soluble thiamine derivative used as a treatment for diabetic neuropathy, can inhibit three major pathways: the hexosamine pathway, the advanced glycation...
**Purity:** 99.58%
**Clinical Data:** Launched
**Size:** 10mM x 1mL in DMSO, 1 g, 5 g

### Bergenin
**Cat. No.: HY-N0017**
**Bioactivity:** Bergenin, a polyphenol, is a potent antinarcotic agent with antioxidant action. IC50 value: < 2.5 μM (antiplasmodial) [3] Target: In vitro: The naloxone-precipitated withdrawal symptom (jumping frequency) was significantly ameliorated (50% of control group) by administration of bergenin (20 mg/kg) in...
**Purity:** 99.50%
**Clinical Data:** No Development Reported
**Size:** 10mM x 1mL in DMSO, 2 mg, 5 mg, 10 mg, 50 mg

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www.MedChemExpress.com
Bromhexine hydrochloride
Cat. No.: HY-B0372A

Bioactivity: Bromhexine Hydrochloride is a medication prescribed for coughs which works by dissolving hard phlegm. Target: Others Bromhexine is a mucolytic agent used in the treatment of respiratory disorders associated with viscid or excessive mucus. In addition, bromhexine has antioxidant properties.

Purity: 99.91%
Clinical Data: Launched
Size: 10mM x 1mL in DMSO, 5 g, 10 g

Bufotalin
Cat. No.: HY-N0878

Bioactivity: Bufotalin is a cardiotonic bufanolide steroid, cardiac glycoside analogue, secreted by a number of toad species; a novel anti-osteoblastoma agent. IC50 value: Target: in vitro: bufotalin induced osteoblastoma cell death and apoptosis in dose- and time-dependent manners. Further, bufotalin induced...

Purity: 98.93%
Clinical Data: No Development Reported
Size: 10mM x 1mL in DMSO, 5 mg, 10 mg

Butylhydroxyanisole
(Butylated hydroxyanisole; BHA; E320)
Cat. No.: HY-B1066

Bioactivity: Butylhydroxyanisole is an antioxidant, consisting of a mixture of two isomeric organic compounds, used as a food additive preservative.

Purity: 99.0%
Clinical Data: No Development Reported
Size: 10mM x 1mL in DMSO, 1 g

Calycosin-7-O-β-D-glucoside
Cat. No.: HY-N0520

Bioactivity: Calycosin-7-O-β-D-glucoside, a melanin biosynthesis inhibitor, is isolated from the methanol extract of astragalus. IC50 value: In vitro: Calycosin-7-O-β-D-glucoside showed a melanin biosynthesis inhibition zone in a culture plate of Streptomyces...

Purity: 98.71%
Clinical Data: No Development Reported
Size: 10mM x 1mL in DMSO, 10 mg, 50 mg

Canthaxanthin
(E 161g; all-trans-Canthaxanthin)
Cat. No.: HY-B1960

Bioactivity: Canthaxanthin is a red-orange carotenoid with various biological activities, such as antioxidant, antitumor properties.

Purity: 98.0%
Clinical Data: No Development Reported
Size: 5 mg, 10 mg, 50 mg, 100 mg

Chlorogenic acid
(3-O-Caffeoylquinic acid; Heriguard; NSC-407296)
Cat. No.: HY-N0055

Bioactivity: Chlorogenic acid is a major phenolic compound in coffee and tea. It plays several important and therapeutic roles such as antioxidant activity, antibacterial, hepatoprotective, cardioprotective, anti-inflammatory, antipyretic, neuroprotective, anti-obesity, antiviral, anti-microbial,...

Purity: 99.29%
Clinical Data: Phase 3
Size: 10mM x 1mL in DMSO, 500 mg

Cichoric Acid
(Cichoric acid; Dicaffeoyltartaric acid)
Cat. No.: HY-N0457

Bioactivity: Cichoric Acid, a natural product, is reported to be antioxidative.

Purity: 99.95%
Clinical Data: No Development Reported
Size: 10mM x 1mL in DMSO, 10 mg, 25 mg, 50 mg

Coenzyme Q10
(Ubiquinone-10, CoQ10)
Cat. No.: HY-N0111

Bioactivity: Coenzyme Q10 is an essential cofactor of the electron transport chain and a potent antioxidant agent.

Purity: 98.0%
Clinical Data: No Development Reported
Size: 100 mg, 200 mg, 500 mg, 1 g, 5 g

Cynarin
(Cynarine)
Cat. No.: HY-N0359

Bioactivity: Cynarin is an antichoke agent with a variety of biological activities including antioxidant, antihistaminic and antiviral activities.

Purity: 98.0%
Clinical Data: No Development Reported
Size: 10mM x 1mL in DMSO, 5 mg, 10 mg, 25 mg

Cysteamine
(β-Mercaptoethylamine; 2-Aminoethanethiol; 2-Mercaptoethylamine)
Cat. No.: HY-77591A

Bioactivity: Cysteamine is an agent for the treatment of nephropathic cystinosis and an antioxidant. Target: Others Cysteamine has been shown to increase intracellular glutathione levels in cystinotic cells, thus restoring the altered redox state of the cells. Also increased rates of apoptosis in cystinotic...

Purity: 95.0%
Clinical Data: Launched
Size: 10mM x 1mL in Water, 5 g
Cysteamine hydrochloride (β-Mercaptoethylamine Hydrochloride; 2-Aminoethanethiol Hydrochloride; ...)  
Cat. No.: HY-77591

**Bioactivity:** Cysteamine Hydrochloride is an agent for the treatment of nephropathic cystinosis and an antioxidant. Target: Others Cysteamine has been shown to increase intracellular glutathione levels in cystinotic cells, thus restoring the altered redox state of the cells. Also increased rates of...

**Purity:** 98.0%

**Clinical Data:** Launched

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

---

D-(-)-Glucono-1,5-lactone  
(Gluconic acid lactone)  
Cat. No.: HY-10301

**Bioactivity:** D-(-)-Glucono-1,5-lactone is a polyhydroxy (PHA) that is capable of metal chelating, moisturizing and antioxidant activity.

**Purity:** 98.0%

**Clinical Data:** No Development Reported

**Size:** 5 g

---

D-alpha-Hydroxyglutaric acid disodium salt  
(Disodium (R)-2-hydroxyglutarate)  
Cat. No.: HY-100542

**Bioactivity:** D-alpha-Hydroxyglutaric acid disodium salt is a weak competitive α-Ketoglutarate (α-KG)-dependent dioxygenase inhibitor with $K_i$ of 10.87±1.85 mM. $K_i$ for L-Hydroxyglutaric acid (L-2-HG) is 0.628±0.036 mM.

**Purity:** 98.0%

**Clinical Data:** No Development Reported

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

---

Disufenton sodium (NXY-059)  
Cat. No.: HY-13244

**Bioactivity:** Disufenton sodium (NXY-059) is the disulfonyl derivative of the neuroprotective spin trap phenylbutynitrone (PBN), both NXY-059, its parent PBN and their hydrolysis/oxidation product MNT are very powerful scavengers of free radicals. IC50 value: Target: Neuroprotectant in vitro: Disufenton sodium is more...

**Purity:** 98.0%

**Clinical Data:** Phase 3

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

---

Ebselen  
(4,4′-Diaminodiphenyl sulfone; DDS)  
Cat. No.: HY-80688

**Bioactivity:** Ebselen is a small-molecule capsid Inhibitor of HIV-1 replication. Target: Ebselen is an organoselenium compound, as an inhibitor of HIV-1 capsid CTD dimerization. Ebselen inhibits early viral postentry events of the HIV-1 life cycle by impairing the incoming capsid uncoating process. [1]...

**Purity:** 99.5%

**Clinical Data:** Launched

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

---

Efaproxiral  
(RSR13)  
Cat. No.: HY-13619

**Bioactivity:** Efaproxiral is a synthetic allosteric modifier of haemoglobin (Hb), decreases Hb-oxygen (O2) binding affinity and enhances oxygenation of hypoxic tumours during radiation therapy. In vitro: Efaproxiral increases oxygen levels in hypoxic tumor tissues by binding non-covalently to the hemoglobin tetramer...

**Purity:** 99.94%

**Clinical Data:** Phase 3

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

---

Efaproxiral sodium  
(RSR13 sodium)  
Cat. No.: HY-13619A

**Bioactivity:** Efaproxiral sodium is a synthetic allosteric modifier of haemoglobin (Hb), decreases Hb-oxygen (O2) binding affinity and enhances oxygenation of hypoxic tumours during radiation therapy. In vitro: Efaproxiral increases oxygen levels in hypoxic tumor tissues by binding non-covalently to the...

**Purity:** 98.0%

**Clinical Data:** Phase 3

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

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www.MedChemExpress.com
<table>
<thead>
<tr>
<th><strong>Ellagic acid</strong></th>
<th><strong>Cat. No.: HY-80183</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bioactivity:</strong> Ellagic acid is a natural antioxidant, and acts as a potent and ATP-competitive CK2 inhibitor, with an IC₅₀ of 40 nM and a Kᵢ of 20 nM.</td>
<td></td>
</tr>
<tr>
<td><strong>Purity:</strong> 99.92%</td>
<td></td>
</tr>
<tr>
<td><strong>Clinical Data:</strong> Phase 2</td>
<td></td>
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<tr>
<td><strong>Size:</strong> 10 mM x 1 mL in DMSO, 5 mg, 10 mg</td>
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<thead>
<tr>
<th><strong>Emeramide</strong></th>
<th><strong>Cat. No.: HY-16739</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bioactivity:</strong> Emeramide is a novel lipid-soluble, thiol-redox antioxidant and heavy metal chelator.</td>
<td></td>
</tr>
<tr>
<td><strong>Purity:</strong> 99.56%</td>
<td></td>
</tr>
<tr>
<td><strong>Clinical Data:</strong> Launched</td>
<td></td>
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<tr>
<td><strong>Size:</strong> 10 mM x 1 mL in DMSO, 100 mg, 500 mg</td>
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<thead>
<tr>
<th><strong>Epiberberine chloride</strong></th>
<th><strong>Cat. No.: HY-N0226A</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bioactivity:</strong> Epiberberine chloride is an alkaloid isolated from Coptis chinensis, acts as a potent AChE and BChE inhibitor, and a non-competitive BACE1 inhibitor, with IC₅₀ of 1.07, 6.03 and 8.55 μM, respectively. Epiberberine chloride has antioxidant...</td>
<td></td>
</tr>
<tr>
<td><strong>Purity:</strong> 99.60%</td>
<td></td>
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<tr>
<td><strong>Clinical Data:</strong> No Development Reported</td>
<td></td>
</tr>
<tr>
<td><strong>Size:</strong> 10 mM x 1 mL in DMSO, 5 mg, 10 mg</td>
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<thead>
<tr>
<th><strong>Ethoxyquin</strong></th>
<th><strong>Cat. No.: HY-B1425</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bioactivity:</strong> Ethoxyquin is an antioxidant which has been used in animal feed for many years and also an inhibitor of heat shock protein 90 (Hsp90).</td>
<td></td>
</tr>
<tr>
<td><strong>Purity:</strong> 98.05%</td>
<td></td>
</tr>
<tr>
<td><strong>Clinical Data:</strong> No Development Reported</td>
<td></td>
</tr>
<tr>
<td><strong>Size:</strong> 10 mM x 1 mL in DMSO, 1 g</td>
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<thead>
<tr>
<th><strong>Eugenol</strong></th>
<th><strong>Cat. No.: HY-N0337</strong></th>
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</thead>
<tbody>
<tr>
<td><strong>Bioactivity:</strong> Eugenol is an essential oil found in cloves with antibacterial, anthelmintic and antioxidant activity. Eugenol is shown to inhibit lipid peroxidation.</td>
<td></td>
</tr>
<tr>
<td><strong>Purity:</strong> 99.86%</td>
<td></td>
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<tr>
<td><strong>Clinical Data:</strong> No Development Reported</td>
<td></td>
</tr>
<tr>
<td><strong>Size:</strong> 10 mM x 1 mL in DMSO, 100 mg, 500 mg</td>
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<thead>
<tr>
<th><strong>Ferulic acid sodium</strong></th>
<th><strong>(Sodium ferulate) Cat. No.: HY-N0060A</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bioactivity:</strong> Ferulic acid (4-hydroxy-3-methoxycinnamic acid) is a phenolic compound present in several plants with claimed beneficial effects in prevention and treatment of disorders linked to oxidative stress and inflammation. IC₅₀ value: Target: 5-HT Receptor In vitro: In the present study we have showed that...</td>
<td></td>
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<tr>
<td><strong>Purity:</strong> 99.74%</td>
<td></td>
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<tr>
<td><strong>Clinical Data:</strong> No Development Reported</td>
<td></td>
</tr>
<tr>
<td><strong>Size:</strong> 10 mM x 1 mL in DMSO, 1 g, 5 g</td>
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<thead>
<tr>
<th><strong>Gallic acid</strong></th>
<th><strong>(3,4,5-Trihydroxybenzoic acid) Cat. No.: HY-N0523</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bioactivity:</strong> Gallic acid is an antioxidant which can inhibit both COX-2.</td>
<td></td>
</tr>
<tr>
<td><strong>Purity:</strong> 99.97%</td>
<td></td>
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<tr>
<td><strong>Clinical Data:</strong> Launched</td>
<td></td>
</tr>
<tr>
<td><strong>Size:</strong> 10 mM x 1 mL in DMSO, 100 mg, 500 mg</td>
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<thead>
<tr>
<th><strong>Glabridin</strong></th>
<th><strong>Cat. No.: HY-N0393</strong></th>
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<tbody>
<tr>
<td><strong>Bioactivity:</strong> Glabridin is a natural isoflavan from Glycyrrhiza glabra, binds to and activates PPARγ, with an EC₅₀ of 6115 nM. Glabridin exhibits antioxidant, anti-bacterial, anti-nephritic, anti-diabetic, anti-fungal, antitumor, anti-inflammatory, ant osteoporotic, cardiovascular protective, neuroprotective...</td>
<td></td>
</tr>
<tr>
<td><strong>Purity:</strong> 99.98%</td>
<td></td>
</tr>
<tr>
<td><strong>Clinical Data:</strong> No Development Reported</td>
<td></td>
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<tr>
<td><strong>Size:</strong> 10 mM x 1 mL in DMSO, 10 mg</td>
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<thead>
<tr>
<th><strong>Glucoraphanin</strong></th>
<th><strong>Cat. No.: HY-N4068</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bioactivity:</strong> Glucoraphanin, a natural glucosinolate found in cruciferous vegetable, is a stable precursor of the Nrf2 inducer sulforaphane, which possesses antioxidant, anti-inflammatory, and anti-carcinogenic effects.</td>
<td></td>
</tr>
<tr>
<td><strong>Purity:</strong> 99.07%</td>
<td></td>
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<tr>
<td><strong>Clinical Data:</strong> No Development Reported</td>
<td></td>
</tr>
<tr>
<td><strong>Size:</strong> 10 mM x 1 mL in Water, 5 mg, 10 mg</td>
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</tbody>
</table>
Glucosamine hydrochloride  
(D-(-)-Glucosamine hydrochloride; Chitosamine hydrochloride)  
Cat. No.: HY-N0733

Bioactivity:  Glucosamine (hydrochloride) is a natural product. IC50 value:  
Target: In vitro: Glucosamine hydrochloride exhibited  
dose-dependent DPPH antioxidant activity [1]. Short-term (4 h)  
glucosamine hydrochloride treatment inhibited HIF-1α at the  
protein level, decreased phosphorylation of p70S6K and S6,...

Purity:  98.0%
Clinical Data:  Launched
Size:  10mM x 1mL in Water,  
50 mg

Glutathione oxidized  
(L-Glutathione oxidized; GSSG)  
Cat. No.: HY-D0844

Bioactivity:  Glutathione oxidized is produced by the oxidation of  
glutathione which is a major intracellular antioxidant and  
detoxifying agent.

Purity:  98.30%
Clinical Data:  No Development Reported
Size:  10mM x 1mL in Water,  
100 mg

H2DCFDA  
(DFCH-DA; 2',7'-Dichlorodihydrofluorescein diacetate)  
Cat. No.: HY-D0940

Bioactivity:  H2DCFDA is a cell-permeable probe used to detect intracellular  
reactive oxygen species (ROS).

Purity:  99.82%
Clinical Data:  No Development Reported
Size:  10mM x 1mL in DMSO,  
50 mg

Hexaconazole  
((-)-Hexaconazole)  
Cat. No.: HY-A0278

Bioactivity:  Hexaconazole is a systemic fungicide used for the control of  
many fungi particularly Ascomycetes and Basidiomycetes. In  
vitro: Among the enzymatic antioxidants, superoxide dismutase  
and peroxidase are significantly up-regulated by hexaconazole.  
[1] Hexaconazole and its enantiomers cause the down-regulation...

Purity:  98.02%
Clinical Data:  No Development Reported
Size:  10mM x 1mL in DMSO,  
100 mg, 500 mg, 1 g, 5 g

HO-1-IN-1  
(Cat. No.: HY-111798

Bioactivity:  HO-1-IN-1 (Compound 2) is a heme oxygenase 1 (HO-1)  
inhibitor with an IC50 of 250 nM [1].

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

HO-1-IN-1 hydrochloride  
(Cat. No.: HY-111798A

Bioactivity:  HO-1-IN-1 hydrochloride (Compound 2) is a heme oxygenase 1 (HO-1)  
inhibitor with an IC50 of 250 nM [1].

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

HTHQ  
(1-O-hexyl-2,3,5-trimethylhydroquinone)  
Cat. No.: HY-100768

Bioactivity:  HTHQ, which is a hydroquinone monoalkyl ether, is a potent  
anti-oxidative agent, even at low dose levels. HTHQ is found  
to be a potent anti-lipid-peroxidative compound and its  
antioxidation activity to be extremely elevated in biological  
systems, such as that of liver microsomes via the generation...

Purity:  99.65%
Clinical Data:  No Development Reported
Size:  10mM x 1mL in DMSO,  
10 mg, 50 mg, 100 mg

Isoquercitrin  
(Isoquercitrin; Isoquercetin)  
Cat. No.: HY-N0768

Bioactivity:  Isoquercitrin is an effective antioxidant and an eosinophilic  
inflammation suppressor.

Purity:  99.97%
Clinical Data:  No Development Reported
Size:  10mM x 1mL in DMSO,  
10 mg, 50 mg, 100 mg
| **Isosteviol**  
| ((-)-Isosteviol; iso-Steviol) | Cat. No.: HY-N0872 |
| **Bioactivity:** | Isosteviol is a derivative of stevioside, a constituent of Stevia rebaudiana, which is commonly used as a noncaloric sugar substitute in Japan and Brazil. Target: Isosteviol dose-dependently relaxed the vasopressin (10-8 M)-induced vasoconstriction in isolated aortic rings with or without... |
| **Purity:** | 98.0% |
| **Clinical Data:** | No Development Reported |
| **Size:** | 10mM x 1mL in DMSO, 5 mg, 10 mg |

| **L-Ascorbic acid**  
| (L-Ascorbate; Vitamin C) | Cat. No.: HY-B0166 |
| **Bioactivity:** | L-Ascorbic acid is an effective reducing agent and donor antioxidant. |
| **Purity:** | 99.89% |
| **Clinical Data:** | Launched |
| **Size:** | 10mM x 1mL in Water, 1 g |

| **L-Ascorbic acid sodium salt**  
| ((+)-Sodium L-ascorbate; Vitamin C sodium salt; Sodium L-ascorbate) | Cat. No.: HY-B0166A |
| **Bioactivity:** | L-Ascorbic acid (sodium) is a more bioavailable form of vitamin C that is an antioxidant agent. |
| **Purity:** | 98.0% |
| **Clinical Data:** | Phase 4 |
| **Size:** | 10mM x 1mL in Water, 1 g |

| **Lacidipine** | Cat. No.: HY-B0347 |
| **Bioactivity:** | Lacidipine (Lacipil, Motens) is a L-type calcium channel blocker. Target: Calcium Channel Lacidipine, a novel third-generation dihydropyridine calcium channel blocker, has been demonstrated effective for hypertension. lacidipine protects HKCs against apoptosis induced by ATP depletion and... |
| **Purity:** | 99.78% |
| **Clinical Data:** | Launched |
| **Size:** | 10mM x 1mL in DMSO, 10 mg, 50 mg, 100 mg, 200 mg |

| **L-Glutathione reduced**  
| (GSH; γ-L-Glutamyl-L-cysteinyl-glycine) | Cat. No.: HY-D0187 |
| **Bioactivity:** | L-Glutathione reduced (GSH; γ-L-Glutamyl-L-cysteinyl-glycine) is an endogenous antioxidant and is capable of scavenging oxygen-derived free radicals. |
| **Purity:** | 99.83% |
| **Clinical Data:** | No Development Reported |
| **Size:** | 1 g, 5 g |

| **Limonene** | Cat. No.: HY-N0544 |
| **Bioactivity:** | Limonene is a monoterpene in citrus peel oil. A popular disinfectant and food preservative. Antimicrobial activities [1]. Anti-proliferative activities [2]. Antioxidant [3]. |
| **Purity:** | 95.0% |
| **Clinical Data:** | No Development Reported |
| **Size:** | 10mM x 1mL in DMSO, 5 mg |

| **Lipoic acid**  
| ((R)-(+)-α-Lipoic acid; R-(+)-Thioctic acid) | Cat. No.: HY-18733 |
| **Bioactivity:** | Lipoic acid ((R)-(+)-α-Lipoic acid) is an antioxidant, which is an essential cofactor of mitochondrial enzyme complexes. (R)-(+)-α-Lipoic acid is more effective than racemic Lipoic acid. |
| **Purity:** | 99.59% |
| **Clinical Data:** | Phase 4 |
| **Size:** | 10mM x 1mL in Water, 500 mg |

| **Liquiritin** | Cat. No.: HY-N0376 |
| **Bioactivity:** | Liquiritin is a flavonoid isolated from Glycyrrhiza, acts as an antioxidant and has neuroprotective, anti-cancer and anti-inflammatory activity [3] [2]. |
| **Purity:** | 98.07% |
| **Clinical Data:** | No Development Reported |
| **Size:** | 10mM x 1mL in DMSO, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg |

| **Lobetyolin** | Cat. No.: HY-N0327 |
| **Bioactivity:** | Lobetyolin is derived from Codonopsis pilosula and has antioxidative effect. |
| **Purity:** | 99.88% |
| **Clinical Data:** | No Development Reported |
| **Size:** | 10mM x 1mL in DMSO, 5 mg, 10 mg |
Luciferase

**Cat. No.: HY-P1004**

**Bioactivity:** Luciferase from Vibrio fischeri has also been used in a study to investigate the sensitivity of dark mutants of various strains of luminescent bacteria to reactive oxygen species.

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

---

Lycopene

**Cat. No.: HY-N0287**

**Bioactivity:** Lycopene is naturally occurring carotenoids found in tomato, tomato products, and in other red fruits and vegetables; exhibits antioxidant effects.

**Purity:** 98.0%
**Clinical Data:** Phase 4
**Size:** 5 mg, 10 mg, 25 mg, 50 mg

---

Methoxy-PMS (1-Methoxy PMS; 1-Methoxyphenazine methosulfate)

**Cat. No.: HY-D0937**

**Bioactivity:** 1-Methoxy PMS is stable electron-transport mediator between NAD(P)H and tetrazolium dyes. 1-Methoxy PMS can induce active oxygen formation.

**Purity:** 98.14%
**Clinical Data:** No Development Reported
**Size:** 10mM x 1mL in DMSO, 50 mg, 100 mg, 200 mg, 500 mg

---

Methyl gallate

**Cat. No.: HY-N2010**

**Bioactivity:** Methyl gallate is a plant phenolic with antioxidant, anticancer, and anti-inflammatory activities. Methyl gallate also shows bacterial inhibition activity.

**Purity:** 99.96%
**Clinical Data:** No Development Reported
**Size:** 10mM x 1mL in DMSO, 5 g

---

Methyl vanillate

**Cat. No.: HY-75342**

**Bioactivity:** Methyl vanillate, one of the ingredients in Hovenia dulcis Thunb, is a Wnt/β-catenin pathway activator. A benzoate ester that is the methyl ester of vanillic acid. It has a role as an antioxidant and a plant metabolite.

**Purity:** 98.0%
**Clinical Data:** No Development Reported
**Size:** 10mM x 1mL in DMSO, 1 g

---

Mitoquinone mesylate (Mitoquinone methanesulfonate; MitoQ10 mesylate; MitoQ mesylate)

**Cat. No.: HY-100116A**

**Bioactivity:** Mitoquinone mesylate is a TPP-based, mitochondrially targeted antioxidant.

**Purity:** 98.0%
**Clinical Data:** Phase 4
**Size:** 5 mg, 10 mg, 25 mg, 50 mg

---

N-Acetylcysteine amide

**Cat. No.: HY-110256**

**Bioactivity:** N-Acetylcysteine amide is a cell membranes and blood brain barrier permeant thiol antioxidant and neuroprotective agent.

**Purity:** 99.0%
**Clinical Data:** No Development Reported
**Size:** 10mM x 1mL in DMSO, 1 mg, 5 mg

---

Naringenin

**Cat. No.: HY-N0100**

**Bioactivity:** Naringenin is the predominant flavanone in grapefruit; displays strong anti-inflammatory and antioxidant activities.

**Purity:** 98.72%
**Clinical Data:** Phase 1
**Size:** 10mM x 1mL in DMSO, 100 mg, 500 mg, 1 g, 5 g

---

Nisoldipine (BAY-k 5552)

**Cat. No.: HY-17402**

**Bioactivity:** Nisoldipine(BAY-k 5552; Sular) is a calcium channel blocker belonging to the dihydropyridines class, specific for L-type Cav1.2 with IC50 of 10 nM. IC50 value: 10 nM Target: L-type Cav1.2 Nisoldipine is a potent blocker of L-type calcium channels. Nisoldipine binds directly to inactive calcium...

**Purity:** 98.22%
**Clinical Data:** Launched
**Size:** 100 mg, 500 mg, 1 g

---

Nitisinone (NTBC; Nitisone; SC0735)

**Cat. No.: HY-B0607**

**Bioactivity:** Nitisinone(SCD735) is an inhibitor of the enzyme 4-hydroxyphenylpyruvate dioxygenase. Target: 4-Hydroxyphenylpyruvate Dioxygenase Nitisinone is a drug used to slow the effects of hereditary tyrosinemia type 1. Nitisinone reduced urinary HGA levels from an average of 40...

**Purity:** 99.57%
**Clinical Data:** Launched
**Size:** 10mM x 1mL in DMSO, 10 mg, 50 mg
OBA-09

**Cat. No.: HY-12840**

**Bioactivity:** OBA-09 is a novel multimodal neuroprotectant oxopropanoyloxy benzoic acid (a salicylic acid/pyruvate ester); shows robust protective effects in the postischemic brain. IC50 value: Target: OBA-09 exhibited antioxidative effects in the postischemic brain, which was evidenced by remarkable...

**Purity:** 99.86%

**Clinical Data:** No Development Reported

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

---

Octahydrocurcumin

(Hexahydropyrdemethoxycurcumin)

**Cat. No.: HY-N0894**

**Bioactivity:** Octahydrocurcumin is a hydrogenated derivatives of curcumin; metabolite of curcumin. IC50 value: Target: OKT3-induced PBMC proliferation was inhibited by octahydrocurcumin with IC50 of 82 uM. The investigated substances with the strongest effect on radical scavenging were tetrahydro-, hexahydro-, and...

**Purity:** 99.52%

**Clinical Data:** No Development Reported

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

---

Octyl gallate

(n-Octyl gallate; Stabilizer GA B)

**Cat. No.: HY-N2011**

**Bioactivity:** Octyl gallate (Progallin O) is widely used as a food additive, with antimicrobial and antioxidant activity. Octyl gallate (Progallin O) shows selective and sensitive fluorescent property.

**Purity:** 99.96%

**Clinical Data:** No Development Reported

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

---

Phillygenin

(Phillygenol; Epipinoresin methyl ether; (+)-Phillygenin)

**Cat. No.: HY-N0483**

**Bioactivity:** Phillygenin is an active ingredient from Forsythia with many medicinal properties, such as antioxidant, reducing blood lipid, inhibition of low density lipoprotein oxidation. In vitro: 1) Phillygenin shows a greater inhibition on mouse B16 melanoma cells potential than vincristine. 2) phillygenin had...

**Purity:** 98.0%

**Clinical Data:** No Development Reported

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

---

Pinocembrin

((+)-Pinocoembrin; Dihydrochrysin; Galangin flavanone)

**Cat. No.: HY-N0575**

**Bioactivity:** Pinocembrin ((+)-Pinocoembrin) is a flavonoid found in propolis, acts as a competitive inhibitor of histidine decarboxylase, and is an effective anti-allergic agent, with antioxidant, antimicrobial and anti-inflammatory properties.

**Purity:** 99.26%

**Clinical Data:** No Development Reported

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

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Piperlongumine

(Piplartine)

**Cat. No.: HY-N2329**

**Bioactivity:** Piperlongumine is a natural alkaloid isolated from Piper longum Linn, possesses anti-inflammatory, antibacterial, antiangiogenic, antioxidant, antitumor, and antidiabetic activities. Piperlongumine induces ROS, ...

**Purity:** 99.19%

**Clinical Data:** No Development Reported

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

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Procyanidin B2

(Proanthocyanidin B2)

**Cat. No.: HY-N0796**

**Bioactivity:** Procyanidin B2 is a natural flavonoid, with anti-cancer, antioxidant activities.

**Purity:** 99.40%

**Clinical Data:** No Development Reported

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

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Protopine

(Corydinine)

**Cat. No.: HY-N0793**

**Bioactivity:** Protopine, an isoquinoline alkaloid contained in plants in northeast Asia. IC50 Value: Target: In vitro: Protopine was found to reduce nitric oxide (NO), cyclooxygenase-2 (COX-2), and prostaglandin E(2) (PGE(2)) production by LPS-stimulated Raw 264.7 cells, without a cytotoxic effect. Pre-treatment of...

**Purity:** 98.04%

**Clinical Data:** No Development Reported

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

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Quercitrin

(Quercetin 3-rhamnoside)

**Cat. No.: HY-N0418**

**Bioactivity:** Quercitrin is a natural compound found in Tartary buckwheat with a potential anti-inflammation effect that is used to treat heart and vascular conditions. IC50 value: Target: In vitro: There were significant increases in caspase-3 activity, loss of MMP, and increases in the apoptotic cell population in...

**Purity:** 99.12%

**Clinical Data:** No Development Reported

**Size:** 10mM x 1mL in DMSO,
5 mg, 10 mg, 50 mg, 100 mg
Reynoutrin (Quercetin-3-D-xyloside; Reinutrin) Cat. No.: HY-N1354

Bioactivity: Reynoutrin (Quercetin-3-D-xyloside) is a flavonoid from Psidium cattleianum, with antioxidant and radical-scavenging activity.[1]

Purity: 97.0%
Clinical Data: No Development Reported
Size: 10mM x 1mL in DMSO, 5 mg, 10 mg, 25 mg, 50 mg

Rhein (Rheic Acid; Rhubarb yellow; Monorhein) Cat. No.: HY-N0105

Bioactivity: Rhein is a lipophilic anthraquinone extensively found in medicinal herbs, and has many pharmacological effects, including epatoprotective, nephroprotective, anti-inflammatory, antioxidant, anticancer, and antimicrobial activities. IC50 value: Target: In vitro: Rhein (0.1 and 1... Purity: 99.0%
Clinical Data: No Development Reported
Size: 10mM x 1mL in DMSO, 100 mg, 200 mg, 500 mg

Riboflavin Tetrabutyrate Cat. No.: HY-B2239

Bioactivity: Riboflavin tetrabutyrate is a lipophilic flavin derivative with antioxidant and lipid peroxide-removing activity.

Purity: 98.56%
Clinical Data: Launched
Size: 10mM x 1mL in DMSO, 100 mg

Rutin (Rutoside; Quercetin 3-O-rutinoside) Cat. No.: HY-N0148

Bioactivity: Rutin, a naturally occurring flavonoid glycoside, has antioxidant, anti-inflammatory, anti-allergic, anti-angiogenic and antiviral properties.

Purity: 98.0%
Clinical Data: Launched
Size: 10mM x 1mL in DMSO, 5 g, 10 g

S-Methyl-L-cysteine (L-S-Methylcysteine) Cat. No.: HY-B2188

Bioactivity: S-Methyl-L-cysteine is a natural product that acts as a substrate in the catalytic antioxidant system mediated by methionine sulfoxide reductase A (MSRA), with antioxidant, neuroprotective, and anti-obesity activities.

Purity: 95.0%
Clinical Data: No Development Reported
Size: 10mM x 1mL in Water, 100 mg

Salsalate (Salicylsalicylic acid; Disalicylic acid) Cat. No.: HY-B1245

Bioactivity: Salsalate is a nonsteroidal anti-inflammatory drug (NSAID). Target Salsalate is a medication that belongs to the salicylate and non-steroidal anti-inflammatory drug (NSAID) classes. Relative to other NSAIDs, Salsalate has a weak inhibitory effect on the cyclooxygenase enzyme and decreases...

Purity: 99.0%
Clinical Data: Launched
Size: 10mM x 1mL in DMSO, 100 mg

Schisandrin B (Schizandrin-B; Wuweizisu-B; gamma-Schisandrin) Cat. No.: HY-N0089

Bioactivity: Schisandrin B(Wuweizisu-B) is a dibenzocyclooctadiene derivative isolated from Fructus Schisandrae, has been shown to produce antioxidant effect on rodent liver and heart. IC50 value: Target: in vitro: Schisandrin B exhibits anti-inflammatory activity through modulation of the...

Purity: 99.99%
Clinical Data: No Development Reported
Size: 10mM x 1mL in DMSO, 10 mg, 50 mg

Secoisolariciresinol diglucoside (SDG; LGM2605) Cat. No.: HY-105008

Bioactivity: Secoisolariciresinol diglucoside (SDG; LGM2605) is a non-toxic free radical scavenger and antioxidant, reduces reduces ROS generation. Secoisolariciresinol diglucoside enhances activation Nrf2 signaling, inhibits myeloperoxidase (MPO).

Purity: 99.95%
Clinical Data: Phase 2
Size: 10mM x 1mL in Water, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

Silibinin (Silybin; Silibinin A; Silymarin I) Cat. No.: HY-13748

Bioactivity: Silibinin, an effective anti-cancer and chemopreventive agent, has been shown to exert multiple effects on cancer cells, including inhibition of both cell proliferation and migration. IC50 value: Target: anticancer in vitro: silibinin significantly induced the expression of the non-steroidal...

Purity: 98.0%
Clinical Data: Launched
Size: 10mM x 1mL in DMSO, 100 mg, 500 mg

Sinapine thiocyanate Cat. No.: HY-N0450

Bioactivity: Sinapine is an alkaloid from seeds of the cruciferous species which shows favorable biological activities such as antioxidant and radio-protective activities.

Purity: 98.32%
Clinical Data: No Development Reported
Size: 10mM x 1mL in DMSO, 10 mg, 25 mg, 50 mg, 100 mg, 200 mg
| **Sinapinic acid**  
(Sinapic acid) | **Cat. No.: HY-W009732** | **Bioactivity:** | Sinapinic acid (Sinapic acid) is a phenolic compound isolated from Hydnophytum formicarum Jack. Rhizome, acts as an inhibitor of HDAC, with an IC50 of 2.27 mM [1], and also inhibits ACE-1 activity [2]. Sinapinic acid possesses potent... |
| Purity: 99.61% | Clinical Data: No Development Reported | Size: 10mM x 1mL in DMSO, 100 mg |

| **Sodium formononetin-3′-sulfonate**  
(Sul-F) | **Cat. No.: HY-13063** | **Bioactivity:** | Sodium formononetin-3′-sulfonate (Sul-F) is a water-sol. derivates of formononetin. IC50 value: Target: Research results showed that treatment with Sul-F significantly prevented the elevation of ST-segment level, decreased the contents of creatine kinase-MB, lactate dehydrogenase, alanine... |
| Purity: 99.95% | Clinical Data: No Development Reported | Size: 10mM x 1mL in DMSO, 5 mg, 10 mg |

| **Squalene**  
(Super Squalene; trans-Squalene; AddaVax) | **Cat. No.: HY-N1214** | **Bioactivity:** | Squalene is an intermediate product in the synthesis of cholesterol, and shows several pharmacological properties such as hypolipidemic, hepatoprotective, cardioprotective, antioxidant, and antitoxicant activity. |
| Purity: 98.0% | Clinical Data: No Development Reported | Size: 10mM x 1mL in DMSO, 5 mg, 10 mg |

| **Sulcotrione** | **Cat. No.: HY-107368** | **Bioactivity:** | Sulcotrione is a β-triketone herbicide which can inhibit hydroxypressyruvate dioxygenase (HPPD). |
| Purity: 99.56% | Clinical Data: No Development Reported | Size: 10mM x 1mL in DMSO, 50 mg, 100 mg |

| **trans-Trimethoxyresveratrol**  
(trans-trimethoxy Resveratrol; E-Resveratrol Trimethyl Ether; Tri-O-methylresveratrol) | **Cat. No.: HY-N1408** | **Bioactivity:** | Trans-Trimethoxyresveratrol is a derivative of Resveratrol (RSV),and it may be a more potent anti-inflammatory, antiangiogenic and vascular-disrupting agent when compared with resveratrol. In vitro: The in vitro study of resveratrol and trans-Trimethoxyresveratrol showed rather weak cytotoxic... |
| Purity: 99.72% | Clinical Data: No Development Reported | Size: 10mM x 1mL in DMSO, 50 mg |

| **Trolox** | **Cat. No.: HY-101445** | **Bioactivity:** | Trolox is a vitamin E analogue and is a powerful antioxidant. |
| Purity: 99.53% | Clinical Data: No Development Reported | Size: 10mM x 1mL in DMSO, 500 mg, 1 g, 5 g |

| **UPF-648** | **Cat. No.: HY-15600** | **Bioactivity:** | UPF-648 is a potent kynurenine 3-monooxygenase (KMO) inhibitor; exhibits highly active at 1 uM (81 ± 10% KMO inhibition); ineffective at blocking KAT activity. IC50 value: 1 uM (81 ± 10% inhibition) [1] Target: KMO inhibitor in vitro: BFF 122 inhibited KAT activity almost completely at both 1 and... |
| Purity: 99.12% | Clinical Data: No Development Reported | Size: 10mM x 1mL in DMSO, 5 mg, 10 mg |

| **Uric acid** | **Cat. No.: HY-B2130** | **Bioactivity:** | Uric acid is an endogenous antioxidant that scavenge reactive oxygen species (ROS) including singlet oxygen, oxygen radicals, and peroxynitrite. |
| Purity: 99.0% | Clinical Data: No Development Reported | Size: 1 g |

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**Bioactivity:**
- Sinapinic acid (Sinapic acid) is a phenolic compound isolated from Hydnophytum formicarum Jack. Rhizome, acts as an inhibitor of HDAC, with an IC50 of 2.27 mM [1], and also inhibits ACE-1 activity [2]. Sinapinic acid possesses potent...
- Sodium formononetin-3′-sulfonate (Sul-F) is a water-sol. derivates of formononetin. IC50 value: Target: Research results showed that treatment with Sul-F significantly prevented the elevation of ST-segment level, decreased the contents of creatine kinase-MB, lactate dehydrogenase, alanine...
- Squalene is an intermediate product in the synthesis of cholesterol, and shows several pharmacological properties such as hypolipidemic, hepatoprotective, cardioprotective, antioxidant, and antitoxicant activity.
- Sulcotrione is a β-triketone herbicide which can inhibit hydroxypressyruvate dioxygenase (HPPD).
- Trans-Trimethoxyresveratrol is a derivative of Resveratrol (RSV), and it may be a more potent anti-inflammatory, antiangiogenic and vascular-disrupting agent when compared with resveratrol. In vitro: The in vitro study of resveratrol and trans-Trimethoxyresveratrol showed rather weak cytotoxic...
- Trolox is a vitamin E analogue and is a powerful antioxidant.
- UPF-648 is a potent kynurenine 3-monooxygenase (KMO) inhibitor; exhibits highly active at 1 uM (81 ± 10% KMO inhibition); ineffective at blocking KAT activity. IC50 value: 1 uM (81 ± 10% inhibition) [1] Target: KMO inhibitor in vitro: BFF 122 inhibited KAT activity almost completely at both 1 and...
- Uric acid is an endogenous antioxidant that scavenges reactive oxygen species (ROS) including singlet oxygen, oxygen radicals, and peroxynitrite.
| **Urolithin A**  
**Cat. No.: HY-100599** |
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<td><strong>Bioactivity:</strong> Urolithin A is an intestinal metabolite of ellagic acid with antioxidant and antiproliferative effects, inhibits T24 and Caco-2 cell growth with $IC_{50}$ values of 43.9 and 49 μM, respectively.</td>
</tr>
</tbody>
</table>
| **Purity:** 97.91%  
**Clinical Data:** Launched  
**Size:** 5 mg, 10 mg, 50 mg, 100 mg |

| **Veratric acid**  
**(3,4-Dimethoxybenzoic acid)  
Cat. No.: HY-N2007** |
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<td><strong>Bioactivity:</strong> Veratric acid (3,4-Dimethoxybenzoic acid) is an orally active phenolic compound derived from vegetables and fruits, has antioxidant [1] and anti-inflammatory activities [2]. Veratric acid also acts as a protective agent against cell mortality.</td>
</tr>
</tbody>
</table>
| **Purity:** 99.99%  
**Clinical Data:** No Development Reported  
**Size:** 10mM x 1mL in DMSO, 100 mg |

| **Visomitin**  
**(SKQ1)  
Cat. No.: HY-100474** |
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<td><strong>Bioactivity:</strong> Visomitin is a new antioxidant with the highest mitochondrial membrane penetrating ability and potent antioxidant capability.</td>
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| **Purity:** 98.0%  
**Clinical Data:** Phase 2  
**Size:** 10mM x 1mL in DMSO, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg |

| **Xanthotoxol**  
**(8-Hydroxypsoralen)  
Cat. No.: HY-30152** |
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<td><strong>Bioactivity:</strong> Xanthotoxol is a biologically active linear furanocoumarin, shows strong pharmacological activities as anti-inflammatory, antioxidant, 5-HT antagonistic, and neuroprotective effects.</td>
</tr>
</tbody>
</table>
| **Purity:** 99.15%  
**Clinical Data:** No Development Reported  
**Size:** 10mM x 1mL in DMSO, 10 mg, 50 mg, 100 mg |

| **Zofenopril calcium**  
**(SQ26991)  
Cat. No.: HY-80655** |
|---|
| **Bioactivity:** Zofenopril Calcium (SQ26991) is an antioxidant that acts as an angiotensin-converting enzyme inhibitor. Target: ACE  
Zofenopril Calcium is a pro-drug designed to undergo metabolic hydrolysis yielding the active free sulfhydryl compound zofenoprilat, which is an angiotensin converting enzyme (ACE)... |
| **Purity:** 97.91%  
**Clinical Data:** Launched  
**Size:** 5 mg, 10 mg, 50 mg, 100 mg |