JNK

c-Jun N-terminal kinase

JNK (c-Jun N-terminal kinase), a kinase subfamily belonging to the MAPK, is activated in response to various stress stimuli and possesses a wide variety of regulatory functions. The JNK family of serine/threonine protein kinases comprises three isoforms (JNK1, JNK2 and JNK3). JNKs are involved in the emergence and progression of diverse pathologies such as neurodegenerative, cardiovascular and metabolic disorders as well as inflammation and cancer.

Similar to the other MAP kinases, JNKs are activated by a phosphorylation cascade generally involving two types of upstream kinases, the so-called MAP kinase kinase kinases (MAP3K, MKKK) and the MAP kinase kinases (MAP2K; MKK). At the MAP2K level, JNKs are activated by MKK4 and MKK7, the former is a common activator of the JNK and the p38 MAP kinase signaling pathway. The JNK cascade shares various intersection points with other pathways making it a part of a complex signaling network.

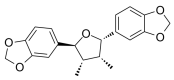
JNK Inhibitors & Activators

(-)-Zuonin A

(D-Epigalbacin)

Cat. No.: HY-N7394A

(-)-Zuonin A (D-Epigalbacin), a naturally occurring lignin, is a potent, selective **JNKs** inhibitor, with IC_{50}s of 1.7 μM, 2.9 μM and 1.74 μM for JNK1, JNK2 and JNK3, respectively.

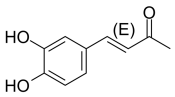


Purity: 99.84%
Clinical Data: No Development Reported
Size: 1 mg

(E)-Osmundacetone

Cat. No.: HY-N1966

(E)-Osmundacetone is the isomer of Osmundacetone. Osmundacetone significantly suppresses the phosphorylation of MAPKs, including JNK, ERK, and p38 kinases. Osmundacetone has a neuroprotective effect against oxidative stress.

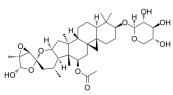


Purity: ≥99.0%
Clinical Data: No Development Reported
Size: 5 mg, 10 mg, 25 mg, 50 mg

Actein

Cat. No.: HY-N6872

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

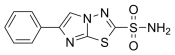


Purity: 98.58%
Clinical Data: No Development Reported
Size: 5 mg

AEG3482

Cat. No.: HY-107599

AEG3482 is a potent **antiapoptotic** compound that inhibits **Jun kinase (JNK)** activity through induced expression of heat shock protein 70 (HSP70). AEG3482 directly binds HSP90, thereby facilitating **HSF1**-dependent expression of HSP70 and HSP25.



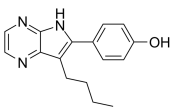
Purity: 99.21%
Clinical Data: No Development Reported
Size: 5 mg

Aloisine A

(RP107)

Cat. No.: HY-112363

Aloisine A (RP107) is a a potent cyclin-dependent kinase (CDK) inhibitor with IC_{50}s of 0.15 μM, 0.12 μM, 0.4 μM, 0.16 μM for CDK1/cyclin B, CDK2/cyclin A, CDK2/cyclin E, CDK5/p35, respectively. Aloisine A ininhibits GSK-3α (IC_{50}=0.5 μM) and GSK-3β (IC_{50}=1.5 μM).



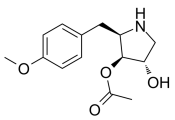
Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

Anisomycin

(Flagecidin; Wuningmeisu C)

Cat. No.: HY-18982

Anisomycin is a potent **protein synthesis** inhibitor which interferes with protein and **DNA synthesis** by inhibiting peptidyl transferase or the 80S ribosome system. Anisomycin is a **JNK** activator, which increases phospho-**JNK**. Anisomycin is a **bacterial** antibiotic.

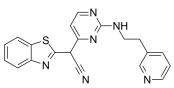


Purity: 98.59%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 10 mg, 50 mg, 100 mg

AS601245

Cat. No.: HY-11010

AS601245 is an orally active, selective, ATP competitive **JNK (c-Jun NH2-terminal protein kinase)** inhibitor with IC_{50}s of 150, 220, and 70 nM for three JNK human isoforms (hJNK1, hJNK2, and hJNK3), respectively.

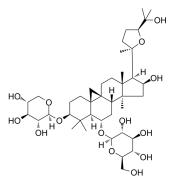


Purity: 98.70%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

Astragaloside IV

Cat. No.: HY-N0431

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



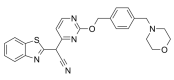
Purity: ≥98.0%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 10 mg, 50 mg, 100 mg

Bentamapimod

(AS 602801)

Cat. No.: HY-14761

Bentamapimod (AS 602801) is an ATP-competitive **JNK** inhibitor with IC_{50} of 80 nM, 90 nM, and 230 nM for **JNK1**, **JNK2**, and **JNK3**, respectively.

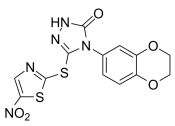


Purity: 99.52%
Clinical Data: Phase 2
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg, 500 mg, 1 g

BI-78D3

Cat. No.: HY-10366

BI-78D3 functions as a substrate competitive inhibitor of **JNK**, inhibit the JNK kinase activity (IC_{50}=280 nM).

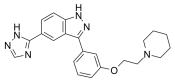


Purity: 99.49%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

CC-401

Cat. No.: HY-13022A

CC-401 is a potent inhibitor of all three forms of **JNK** with K_i of 25 to 50 nM.



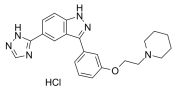
Purity: >98%
Clinical Data: Phase 1
Size: 1 mg, 5 mg

CC-401 hydrochloride

(CC401 HCl)

Cat. No.: HY-13022

CC-401 hydrochloride is a potent inhibitor of all three forms of **JNK** with K_i of 25 to 50 nM.

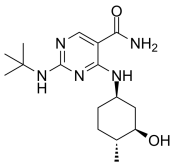


Purity: 99.46%
Clinical Data: Phase 1
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg

CC-90001

Cat. No.: HY-138304

CC-90001 is a potent, selective and orally active inhibitor of **c-Jun N-terminal kinase (JNK)**. CC-90001 shows 12.9-fold selectivity for **JNK1** over **JNK2** in a cell-based model. CC-90001 can be used for the research of idiopathic pulmonary fibrosis.



Purity: 99.85%
Clinical Data: Phase 2
Size: 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

D-JNKI-1

(AM-111; XG-102)

Cat. No.: HY-P0069

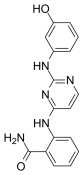
D-JNKI-1 (AM-111) is a highly potent and cell-permeable peptide inhibitor of **JNK**.

Purity: 99.07%
Clinical Data: Phase 3
Size: 1 mg, 5 mg, 10 mg, 50 mg

DB07268

Cat. No.: HY-15737

DB07268 is a potent and selective **JNK1** inhibitor with an IC_{50} value of 9 nM.

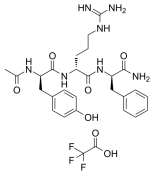


Purity: 99.92%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

DTP3 TFA

Cat. No.: HY-100538A

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

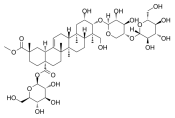


Purity: 98.75%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

Esculentoside H

Cat. No.: HY-N2205

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



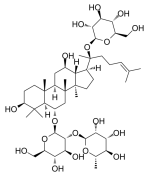
Purity: 98.02%
Clinical Data: No Development Reported
Size: 5 mg, 10 mg

Ginsenoside Re

(Ginsenoside B2; Panaxoside Re; Sanchinoside Re)

Cat. No.: HY-N0044

Ginsenoside Re (Ginsenoside B2) is an extract from Panax notoginseng. Ginsenoside Re decreases the **β-amyloid** protein (**Aβ**). Ginsenoside Re plays a role in antiinflammation through inhibition of **JNK** and **NF-κB**.



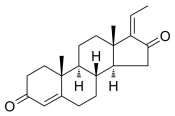
Purity: 98.15%
Clinical Data: Phase 1
Size: 10 mM × 1 mL, 5 mg, 10 mg

Guggulsterone

(Z/E-Guggulsterone)

Cat. No.: HY-107738

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



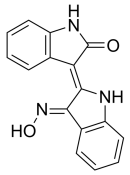
Purity: 99.83%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

Indirubin-3′-oxime

(IDR3O; I3O)

Cat. No.: HY-139254

Indirubin-3′-oxime (IDR3O), a synthetic derivative of indirubin, is a potent inhibitor of cyclin-dependent kinases **(CDKs)** and glycogen synthase kinase 3β **(GSK3β)**.

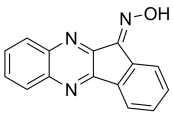


Purity: 99.49%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

IQ-1S free acid

Cat. No.: HY-100233

IQ-1S free acid is a prospective inhibitor of **NF-κB**/activating protein 1 (**AP-1**) activity with an IC_{50} of 2.3±0.41 μM. IQ-1S free acid has binding affinity (K_d values) in the nanomolar range for all three **JNK**s with K_ds of 100 nM, 240 nM, and 360 nM for **JNK3**, **JNK1**, and **JNK2**, respectively.

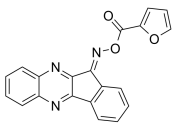


Purity: 99.35%
Clinical Data: No Development Reported
Size: 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

IQ-3

Cat. No.: HY-107600

IQ-3 is a specific inhibitor of the **c-Jun N-terminal kinase (JNK)** family, with preference for JNK3. IQ-3 exhibits K_d values of 0.24 μM, 0.29 μM and 0.066 μM for JNK1, JNK2 and JNK3, respectively.



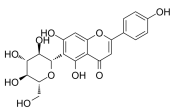
Purity: 98.91%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

Isovitexin

(Saponaretin; Homovitexin)

Cat. No.: HY-N0773

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**.

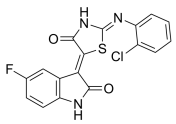


Purity: 99.95%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 25 mg

J30-8

Cat. No.: HY-125838

J30-8 is a potent and isoform-selective inhibitor of **c-Jun N-terminal kinase 3 (JNK3)** with an IC_{50} of 40 nM, which 2500-fold isoform selectivity against JNK1α1 and JNK2α2. J30-8 exhibits neuroprotective activity in vitro and potential for the treatment of neurodegenerative diseases.



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

JIP-1(153-163)

(T1-JIP)

Cat. No.: HY-P1191

JIP-1(153-163) (TI-JIP) is a peptide inhibitor of **c-JNK**, based on residues 153-163 of JNK-interacting protein-1 (JIP-1) (Modifications: Phe-11 = C-terminal amide).

RPKRPTTLNLF-NH_2

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

JIP-1(153-163) TFA

(T1-JIP TFA)

Cat. No.: HY-P1191A

JIP-1(153-163) TFA (TI-JIP TFA) is a peptide inhibitor of **c-JNK**, based on residues 153-163 of JNK-interacting protein-1 (JIP-1) (Modifications: Phe-11 = C-terminal amide).

RPKRPTTLNLF-NH_2 (TFA salt)

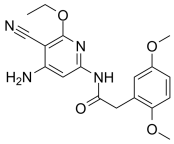
Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

JNK Inhibitor VIII

(TCS JNK 6o)

Cat. No.: HY-107598

JNK Inhibitor VIII (TCS JNK 6o) is a **c-Jun N-terminal kinases (JNK-1, -2, and -3)** inhibitor with K_i values of 2 nM, 4 nM, 52 nM, respectively, and has IC_{50} values of 45 nM and 160 nM for JNK-1 and -2, respectively.



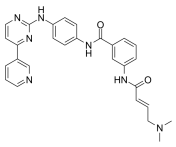
Purity: 99.56%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 1 mg, 5 mg

JNK-IN-7

(JNK inhibitor)

Cat. No.: HY-15617

JNK-IN-7 is a potent **JNK** inhibitor with IC_{50} of 1.5, 2 and 0.7 nM for **JNK1**, **JNK2** and **JNK3**, respectively.



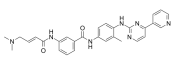
Purity: 98.41%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

JNK-IN-8

(JNK Inhibitor XVI)

Cat. No.: HY-13319

JNK-IN-8 (JNK Inhibitor XVI) is a potent **JNK** inhibitor with IC_{50}s of 4.7 nM, 18.7 nM, and 1 nM for **JNK1**, **JNK2**, and **JNK3**, respectively.

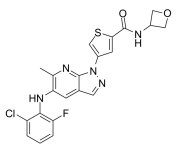


Purity: 99.65%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 2 mg, 5 mg, 10 mg, 50 mg, 100 mg, 200 mg

JNK3 inhibitor-1

Cat. No.: HY-139624

JNK3 inhibitor-1 is a potent and selective **JNK3** inhibitor (IC_{50} = 0.005 μM). JNK3 inhibitor-1 is orally bioavailable and brain penetrant.



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

JTP10--R9 TFA

Cat. No.: HY-P2247

JTP10--R9 TFA is a selective **JNK2** peptide inhibitor, with an IC_{50} of 89 nM, exhibiting 10-fold selectivity for JNK2 over JNK1 and JNK3.

Purity: 99.80%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg, 10 mg

JTP10--TATi TFA

Cat. No.: HY-P2246

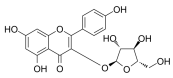
JTP10--TATi TFA is a selective **JNK2** peptide inhibitor, with an IC_{50} of 92 nM, exhibiting 10-fold selectivity for JNK2 over JNK1 and JNK3.

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

Juglanin

Cat. No.: HY-N3442

Juglanin, a natural occurring flavonoid, is a **JNK** acticator, with inflammation and anti-tumor activities. Juglanin can induce **apoptosis** and **autophagy** on human breast cancer cells.



Purity: 99.90%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

L-JNKI-1

Cat. No.: HY-P0069A

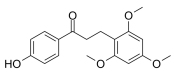
L-JNKI-1 is a cell-permeable peptide inhibitor specific for **JNK**.

Purity: 96.05%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg, 10 mg, 50 mg

Loureirin B

Cat. No.: HY-N1504

Loureirin B, a flavonoid extracted from **Dracaena cochinchinensis**, is an inhibitor of plasminogen activator inhibitor-1 **(PAI-1)**, with an IC_{50} of 26.10μM; Loureirin B also inhibits K_{ATP}, the phosphorylation of **ERK** and **JNK**, and has anti-diabetic activity.

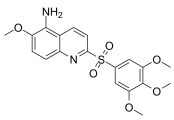


Purity: 99.16%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg

MPT0B392

Cat. No.: HY-101287

MPT0B392, an orally active quinoline derivative, induces **c-Jun N-terminal kinase (JNK)** activation, leading to **apoptosis**.

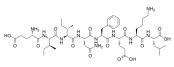


Purity: >98%
Clinical Data: No Development Reported
Size: 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

OVA-E1 peptide

Cat. No.: HY-P2319

OVA-E1 peptide, is an antagonist variant of SIINFEKL [OVA (257-264). OVA-E1 peptide, activates the p38 and JNK cascades similarly in mutant and wild-type thymocytes.

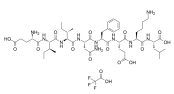


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

OVA-E1 peptide TFA

Cat. No.: HY-P2319A

OVA-E1 peptide TFA, is an antagonist variant of SIINFEKL [OVA (257-264). OVA-E1 peptide, activates the p38 and JNK cascades similarly in mutant and wild-type thymocytes.

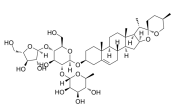


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

Polyphyllin I

Cat. No.: HY-N0047

Polyphyllin I is a bioactive constituent extracted from Paris polyphylla, has strong anti-tumor activity. Polyphyllin I is an activator of the **JNK** signaling pathway and is an inhibitor of **PDK1/Akt/mTOR** signaling. Polyphyllin I induces **autophagy**, G2/M phase arrest and **apoptosis**.

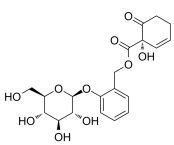


Purity: 99.61%
Clinical Data: No Development Reported
Size: 5 mg, 10 mg, 20 mg

Salicortin

Cat. No.: HY-123503

Salicortin, a phenolic glycoside, has been isolated from many plants such as Populus and Salix species. Salicortin inhibits osteoclast differentiation and bone resorption by down-regulating **JNK** and **NF-κB/NFATc1** signaling pathways.

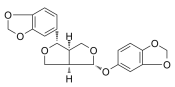


Purity: >98%
Clinical Data:
Size: 100 μg, 1 mg, 5 mg

Sesamolin

Cat. No.: HY-N0809

Sesaminol, isolated from Justicia orbiculata, has antioxidative activity, Sesaminol inhibits **lipid peroxidation** and shows neuroprotection effect. Sesaminol potently inhibits **MAPK** cascades by preventing phosphorylation of **JNK**, **p38 MAPKs**, and **caspase-3** but not ERK-MAPK expression.

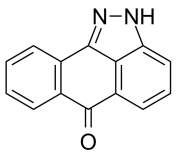


Purity: 99.78%
Clinical Data: No Development Reported
Size: 5 mg, 10 mg, 20 mg

SP600125

Cat. No.: HY-12041

SP600125 is an orally active, reversible, and ATP-competitive **JNK** inhibitor with IC_{50}s of 40, 40 and 90 nM for **JNK1**, **JNK2** and **JNK3**, respectively. SP600125 is a potent **ferroptosis** inhibitor. SP600125 inhibits **autophagy** and activates **apoptosis**.

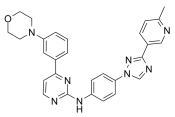


Purity: 99.55%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 10 mg, 50 mg, 100 mg, 200 mg, 500 mg

SR-3306

Cat. No.: HY-12829

SR-3306 is a selective, potent, highly brain penetrant **JNK** inhibitor.

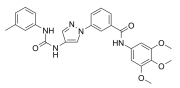


Purity: 99.0%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg

SR-3576

Cat. No.: HY-107596

SR-3576 is a highly potent and selective **JNK3** inhibitor with an IC_{50} of 7 nM.

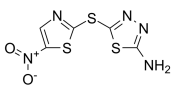


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

SU3327

Cat. No.: HY-107597

SU3327 is a potent, selective and substrate-competitive **JNK** inhibitor with an IC_{50} of 0.7 μM. SU3327 also inhibits protein-protein interactions between **JNK** and JNK Interacting Protein (JIP) with an IC_{50} of 239 nM. SU3327 shows less active against p38α and Akt kinase.



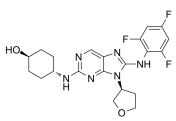
Purity: 98.77%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

Tanzisertib

(CC-930)

Cat. No.: HY-15495

Tanzisertib (CC-930) is a potent **JNK1/2/3** inhibitor with IC_{50}s of 61/7/6 nM, respectively.



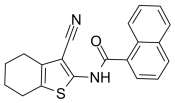
Purity: 99.84%
Clinical Data: Phase 2
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

TCS JNK 5a

(JNK Inhibitor IX)

Cat. No.: HY-15881

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

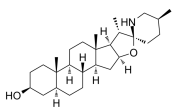


Purity: 98.06%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

Tomatidine

Cat. No.: HY-N2149

Tomatidine acts as an anti-inflammatory agent by blocking **NF-κB** and **JNK** signaling. Tomatidine activates **autophagy** either in mammal cells or C elegans.

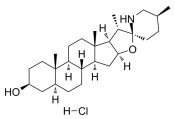


Purity: ≥95.0%
Clinical Data: No Development Reported
Size: 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

Tomatidine hydrochloride

Cat. No.: HY-N2149A

Tomatidine hydrochloride acts as an anti-inflammatory agent by blocking **NF-κB** and **JNK** signaling. Tomatidine hydrochloride activates **autophagy** either in mammal cells or C elegans.

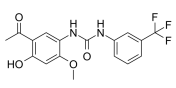


Purity: ≥98.0%
Clinical Data: No Development Reported
Size: 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

TOPK-p38/JNK-IN-1

Cat. No.: HY-144761

TOPK-p38/JNK-IN-1 (Compound B12) is an orally active **TOPK-p38/JNK** signaling pathway inhibitor with the IC_{50} value of 2.14 μM for NO production. TOPK-p38/JNK-IN-1 shows anti-inflammatory activities.

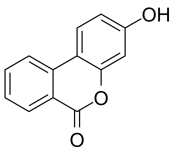


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

Urolithin B

Cat. No.: HY-126307

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

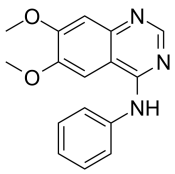


Purity: 99.86%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 10 mg, 50 mg, 100 mg

WHI-P258

Cat. No.: HY-108419

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



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