AMPK

AMP-activated protein kinase

AMPK (AMP-activated protein kinase) is an enzyme that plays a role in cellular energy homeostasis. It consists of three proteins (subunits) that together make a functional enzyme. The net effect of AMPK activation is stimulation of hepatic fatty acid oxidation andketogenesis, inhibition of cholesterol synthesis, lipogenesis, and triglyceride synthesis, inhibition of adipocyte lipolysis and lipogenesis, stimulation of skeletal muscle fatty acid oxidation and muscle glucose uptake by pancreatic beta-cells. AMPK acts as a metabolic master switch regulating several intracellular systems including the cellular uptake of glucose, the β-oxidation of fatty acids and the biogenesis of glucose transporter 4 (GLUT4) and mitochondria.

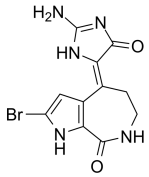
AMPK Inhibitors & Activators

10Z-Hymenialdisine

((Z)-Hymenialdisine; Hymenialdisine)

Cat. No.: HY-N6794

10Z-Hymenialdisine ((Z)-Hymenialdisine) is a natural bioactive pyrrole alkaloid. 10Z-Hymenialdisine is a pan kinase inhibitor, and has anticancer activities.

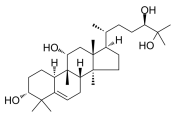


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

3α-Hydroxymogrol

Cat. No.: HY-N6913

3α-Hydroxymogrol is a triterpenoid isolated from Siraitia grosvenorii Swingle, acts as a potent **AMPK** activator, and enhances AMPK phosphorylation.

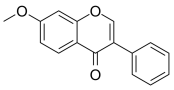


Purity: 98.47%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

7-Methoxyisoflavone

Cat. No.: HY-N6631

7-Methoxyisoflavone is an isoflavone derivative and also an activator of adenosine monophosphate-activated protein kinase (**AMPK**).

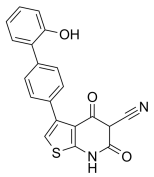


Purity: 99.76%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 100 mg

A-769662

Cat. No.: HY-50662

A-769662 is a potent, reversible **AMPK** activator with EC_{50} of 0.8 μM.



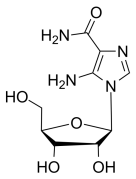
Purity: 98.97%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

AICAR

(Acadesine; AICA Riboside)

Cat. No.: HY-13417

AICAR (Acadesine) is an adenosine analog and a **AMPK** activator. AICAR regulates the glucose and lipid metabolism, and inhibits proinflammatory cytokines and iNOS production. AICAR is also an **autophagy**, **YAP** and **mitophagy** inhibitor.



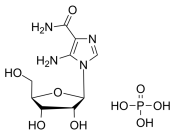
Purity: 99.92%
Clinical Data: Phase 3
Size: 50 mg, 100 mg, 200 mg, 500 mg

AICAR phosphate

(Acadesine phosphate; AICA Riboside phosphate)

Cat. No.: HY-13417A

AICAR phosphate (Acadesine phosphate) is an adenosine analog and a **AMPK** activator. AICAR phosphate regulates the glucose and lipid metabolism, and inhibits proinflammatory cytokines and iNOS production. AICAR phosphate is also an **autophagy**, **YAP** and **mitophagy** inhibitor.

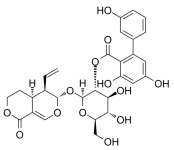


Purity: 99.49%
Clinical Data: Phase 3
Size: 10 mM × 1 mL, 50 mg, 100 mg, 200 mg, 500 mg

Amarogentin

Cat. No.: HY-N2447

Amarogentin is a secoiridoid glycoside that is mainly extracted from Swertia and Gentiana roots. Amarogentin exhibits many biological effects, including anti-oxidative, anti-tumour, and anti-diabetic activities.

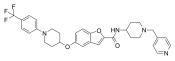


Purity: 98.96%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

AMPK activator 1

Cat. No.: HY-U00292

AMPK activator 1 is an **AMPK** activator extracted from patent WO2013116491A1, compound No.1-75, has an EC_{50} of <0.1μM.

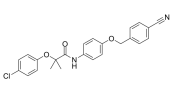


Purity: 98.53%
Clinical Data: No Development Reported
Size: 1 mg

AMPK activator 4

Cat. No.: HY-131334

AMPK activator 4 is a potent **AMPK** activator without inhibition of mitochondrial complex I. AMPK activator 4 selectively activates AMPK in the muscle tissues.

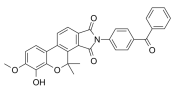


Purity: 99.42%
Clinical Data: No Development Reported
Size: 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

Ampkinone

Cat. No.: HY-12831

Ampkinone is an indirect AMP-activated protein kinase (**AMPK**) activator.



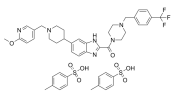
Purity: 99.31%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 2 mg, 5 mg, 10 mg

Tel: 609-228-6898 Fax: 609-228-5909 Email: sales@MedChemExpress.com

ASP4132

Cat. No.: HY-136447

ASP4132 is an orally active, potent **AMPK** activator with an EC_{50} of 18 nM. ASP4132 has anti-cancer activity and makes tumor regression in breast cancer xenograft mouse models.

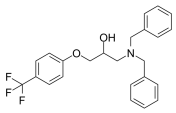


Purity: 98.85%
Clinical Data: Phase 1
Size: 10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

BC1618

Cat. No.: HY-134656

BC1618, an orally active **Fbxo48** inhibitory compound, stimulates Ampk-dependent signaling (via preventing activated pAmpkα from Fbxo48-mediated degradation). BC1618 promotes mitochondrial fission, facilitates autophagy and improves hepatic insulin sensitivity.



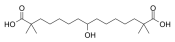
Purity: 99.83%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

Bempedoic acid

(ETC-1002; ESP-55016)

Cat. No.: HY-12357

Bempedoic acid (ETC-1002) is an **ATP-citrate lyase (ACL)** inhibitor. Bempedoic acid (ETC-1002) activates **AMPK**.



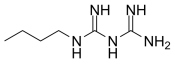
Purity: ≥98.0%
Clinical Data: Launched
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

Buformin

(1-Butylbiguanide)

Cat. No.: HY-B2099

Buformin (1-Butylbiguanide), a potent AMPK activator, acts as an orally active biguanide **antidiabetic agent**. Buformin decreases hepatic gluconeogenesis and lowers blood glucose production in vivo.



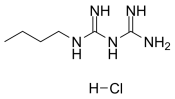
Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

Buformin hydrochloride

(1-Butylbiguanide hydrochloride)

Cat. No.: HY-B2099A

Buformin hydrochloride (1-Butylbiguanide hydrochloride), a potent AMPK activator, acts as an orally active biguanide **antidiabetic agent**. Buformin hydrochloride decreases hepatic gluconeogenesis and lowers blood glucose production in vivo.



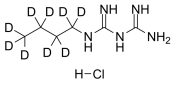
Purity: 98.62%
Clinical Data: No Development Reported
Size: 250 mg, 500 mg

Buformin-d9 hydrochloride

(1-Butylbiguanide-d9 hydrochloride)

Cat. No.: HY-B2099S

Buformin-d9 (1-Butylbiguanide-d9) hydrochloride is the deuterium labeled Buformin. Buformin (1-Butylbiguanide), a potent AMPK activator, acts as an orally active biguanide **antidiabetic agent**. Buformin decreases hepatic gluconeogenesis and lowers blood glucose production in vivo.



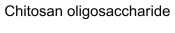
Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

Chitosan oligosaccharide

(COS)

Cat. No.: HY-112108

Chitosan oligosaccharide (COS) is an oligomer of β-(14)-linked D-glucosamine. Chitosan oligosaccharide (COS) activates **AMPK** and inhibits inflammatory signaling pathways including **NF-κB** and **MAPK** pathways.



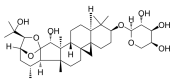
Purity: ≥91.0%
Clinical Data: No Development Reported
Size: 10 mg(10 mg × mL in Water), 500 mg, 1 g, 5 g

Cimiracemoside C

(Cimicifugoside M)

Cat. No.: HY-N6971

Cimiracemoside C is an active component of Cimicifuga racemosa, activates **AMPK**, has the potential activity against diabetes.

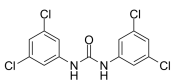


Purity: 99.55%
Clinical Data: No Development Reported
Size: 5 mg, 10 mg

COH-SR4

Cat. No.: HY-124822

COH-SR4 is an **AMPK** activator. COH-SR4 shows potent anti-proliferative activities against leukemia, melanoma, breast and lung cancers. COH-SR4 inhibits adipocyte differentiation via AMPK activation.

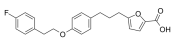


Purity: 99.73%
Clinical Data: No Development Reported
Size: 25 mg, 50 mg, 100 mg

D942

Cat. No.: HY-131958

D942 is a cell penetrant **AMPK** activator and partially inhibits the mitochondrial complex I. In multiple myeloma cells, D942 inhibits cell growth.

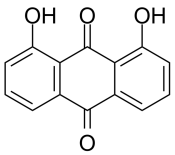


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

Danthron

(Dantron; Chrysazin; 1,8-Dihydroxyanthraquinone) Cat. No.: HY-B0923

Danthron is a natural product extracted from the traditional Chinese medicine rhubarb. Danthron functions in regulating glucose and lipid metabolism by activating **AMPK**.

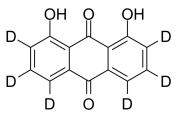


Purity: 98.70%
Clinical Data: Launched
Size: 10 mM × 1 mL, 100 mg

Danthron-d6

(Dantron-d6; Chrysazin-d6; 1,8-Dihydroxyanthraquinone-d6) Cat. No.: HY-B0923S

Danthron-d6 (Dantron-d6) is the deuterium labeled Danthron. Danthron is a natural product extracted from the traditional Chinese medicine rhubarb. Danthron functions in regulating glucose and lipid metabolism by activating **AMPK**.

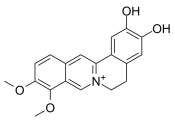


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 10 mg

Demethyleneberberine

Cat. No.: HY-N0592

Demethyleneberberine is a natural mitochondria-targeted antioxidant. Demethyleneberberine alleviates mice colitis and inhibits the inflammatory responses by inhibiting **NF-κB** pathway and regulating the balance of Th cells.

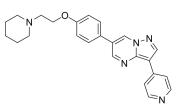


Purity: 98.09%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg

Dorsomorphin

(Compound C; BML-275) Cat. No.: HY-13418A

Dorsomorphin (Compound C) is a selective and ATP-competitive **AMPK** inhibitor (K_i=109 nM in the absence of AMP). Dorsomorphin (BML-275) selectively inhibits BMP type I receptors **ALK2**, **ALK3**, and **ALK6**. Dorsomorphin induces **autophagy**.

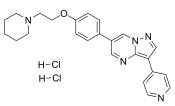


Purity: 99.91%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

Dorsomorphin dihydrochloride

(Compound C dihydrochloride; BML-275 dihydrochloride) Cat. No.: HY-13418

Dorsomorphin dihydrochloride (BML-275 dihydrochloride; Compound C dihydrochloride) is a potent, selective and ATP-competitive **AMPK** inhibitor, with a K_i of 109 nM.

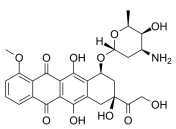


Purity: 99.91%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

Doxorubicin

(Hydroxydaunorubicin) Cat. No.: HY-15142A

Doxorubicin (Hydroxydaunorubicin), a cytotoxic anthracycline antibiotic, is an anti-cancer chemotherapy agent. Doxorubicin inhibits **topoisomerase II** with an IC_{50} of 2.67 μM, thus stopping DNA replication.

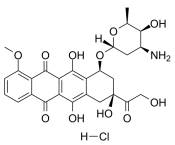


Purity: >98%
Clinical Data: Launched
Size: 5 mg, 10 mg, 25 mg

Doxorubicin hydrochloride

(Hydroxydaunorubicin hydrochloride) Cat. No.: HY-15142

Doxorubicin (Hydroxydaunorubicin) hydrochloride, a cytotoxic anthracycline antibiotic, is an anti-cancer chemotherapy agent. Doxorubicin hydrochloride is a potent human **DNA topoisomerase I** and **topoisomerase II** inhibitor with IC_{50}s of 0.8 μM and 2.67 μM, respectively.

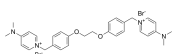


Purity: 99.47%
Clinical Data: Launched
Size: 10 mM × 1 mL, 50 mg, 100 mg, 200 mg, 500 mg, 1 g

EB-3D

Cat. No.: HY-115463

EB-3D is a potent and selective **choline kinase α (ChoKα)** inhibitor, with an IC_{50} of 1 μM for ChoKα1. EB-3D exerts effects on ChoKα expression, **AMPK** activation, **apoptosis**, endoplasmic reticulum stress and lipid metabolism.

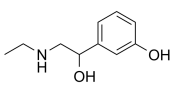


Purity: 98.78%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg

Etilefrine

Cat. No.: HY-A0144

Etilefrine (3-[2-(ethylamino)-1-hydroxyethyl]phenol) is an **α adrenergic** agonist. Etilefrine also is an **AMPK** activator. Etilefrine can be used for the research of postural hypotension.

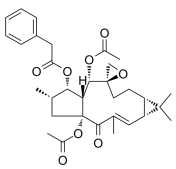


Purity: >98%
Clinical Data: Launched
Size: 1 mg, 5 mg

Euphorbiasteroid

Cat. No.: HY-N2032

Euphorbiasteroid is a tricyclic diperpene of Euphorbia lathyris L., inhibits tyrosinase, and increases the phosphorylation of **AMPK**, with anti-cancer, anti-virus, anti-obesity and multidrug resistance-modulating effect.

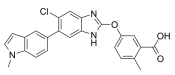


Purity: 99.76%
Clinical Data: No Development Reported
Size: 5 mg, 10 mg, 20 mg

EX229

Cat. No.: HY-112769

EX229, a Benzimidazole derivative, is a potent and allosteric activator of AMP-activated protein kinase (**AMPK**), with K_ds of 0.06 μM, 0.06 μM and 0.51 μM for α1β1γ1, α2β1γ1 and α1β2γ1 in biolayer interferometry, respectively.

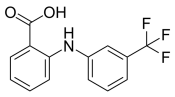


Purity: 98.45%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg

Flufenamic acid

Cat. No.: HY-B1221

Flufenamic acid is a non-steroidal anti-inflammatory agent, inhibits cyclooxygenase (**COX**), activates **AMPK**, and also modulates ion channels, blocking **chloride channels** and **L-type Ca^{2+} channels**, modulating non-selective cation channels (**NSC**), activating...

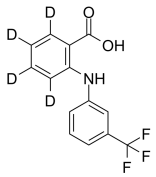


Purity: 99.85%
Clinical Data: Launched
Size: 10 mM × 1 mL, 100 mg

Flufenamic acid-d4

Cat. No.: HY-B1221S

Flufenamic acid-d4 is deuterium labeled Flufenamic acid.

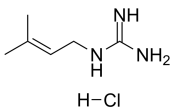


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

Galegine hydrochloride

Cat. No.: HY-N0930B

Galegine hydrochloride, a guanidine derivative, contributes to weight loss in mice. Guanidine hydrochloride is the compound derived from G. officinalis, which gave rise to the biguanides, metformin and phenformin.



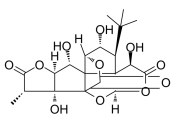
Purity: >98%
Clinical Data: No Development Reported
Size: 5 mg, 10 mg

Ginkgolide C

(BN-52022; Ginkgolide-C)

Cat. No.: HY-N0785

Ginkgolide C is a flavone isolated from Ginkgo biloba leaves, possessing multiple biological functions, such as decreasing platelet aggregation and ameliorating Alzheimer disease.

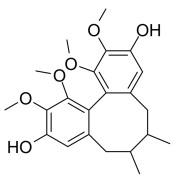


Purity: ≥98.0%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 10 mg, 50 mg

Gomisin J

Cat. No.: HY-N0385

Gomisin J is a small molecular weight lignan found in Schisandra chinensis and has been demonstrated to have vasodilatory activity.

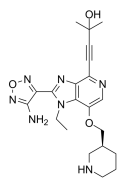


Purity: 99.67%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 1 mg, 5 mg, 10 mg

GSK-690693

Cat. No.: HY-10249

GSK-690693 is an ATP-competitive **pan-Akt** inhibitor with IC_{50}s of 2 nM, 13 nM, 9 nM for **Akt1**, **Akt2** and **Akt3**, respectively. GSK-690693 is also an **AMPK** inhibitor, affects Unc-51-like autophagy activating kinase 1 (ULK1) activity and robustly inhibits STING-dependent IRF3 activation.

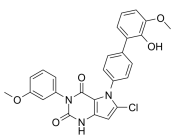


Purity: 98.40%
Clinical Data: Phase 1
Size: 10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

GSK621

Cat. No.: HY-100548

GSK621 is a specific **AMPK** activator, with IC_{50} values of 13-30 μM for AML cells. GSK621 induces **autophagy** and **apoptosis**. GSK621 induces **eiF2α** phosphorylation-a hallmark of **UPR** activation.



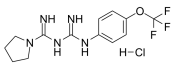
Purity: 98.82%
Clinical Data: No Development Reported
Size: 5 mg, 10 mg, 25 mg

HL271

(IM156 hydrochloride; HL156A hydrochloride)

Cat. No.: HY-136093

HL271 (IM156 hydrochloride; HL156A hydrochloride), a chemical derivative of Metformin (HY-B0627), is a potent **AMPK** activator that increases AMPK phosphorylation. HL271 attenuates aging-associated cognitive impairment in animal model.

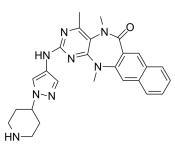


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

HTH-01-015

Cat. No.: HY-12334

HTH-01-015 is a selective **NUAK1/ARK5** inhibitor (IC_{50} is 100 nM). HTH-01-015 inhibits NUAK1 with >100-fold higher potency than NUAK2 (IC50 of >10 μM).

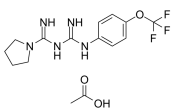


Purity: 99.18%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

IM156

(HL156A; HL271 acetate) Cat. No.: HY-136093A

IM156 (HL156A; HL271 acetate), a chemical derivative of Metformin (HY-B0627), is a potent and orally active **AMPK** activator that increases AMPK phosphorylation. IM156 attenuates aging-associated cognitive impairment in animal model.

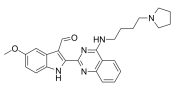


Purity: 99.80%
Clinical Data: Phase 1
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

IQZ23

Cat. No.: HY-133556

IQZ23 inhibits adipocyte differentiation via **AMPK** pathway activation. IQZ23 exerts a high efficacy in decreasing the triglyceride level (EC_{50}=0.033 μM) in 3T3-L1 adipocytes. IQZ23 could be used for the research of obesity and related metabolic disorders.

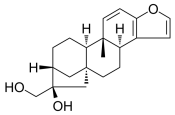


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

Kahweol

Cat. No.: HY-N6258

Kahweol is one of the consituents of the coffee from Coffea Arabica with anti-inflammatory anti-angiogenic, and anti-cancerous activities. Kahweol inhibits **adipogenesis** and increase glucose uptake by AMP-activated protein kinase (**AMPK**) activation. Kahweol induces **apoptosis**.

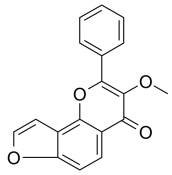


Purity: ≥98.0%
Clinical Data: No Development Reported
Size: 5 mg, 10 mg, 20 mg

Karanjin

Cat. No.: HY-N2534

Karanjin is a major active furanoflavonol constituent of Fordia cauliflora. Karanjin induces GLUT4 translocation in skeletal muscle cells by increasing **AMPK** activity. Karanjin can induce cancer cell death through cell cycle arrest and enhance apoptosis.

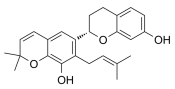


Purity: >98%
Clinical Data: No Development Reported
Size: 5 mg, 10 mg

Kazinol B

Cat. No.: HY-N3426

Kazinol B, a prenylated flavan with a dimethyl pyrane ring, is an inhibitor of **nitric oxide (NO)** production. Kazinol B improves insulin sensitivity by enhancing glucose uptake via the insulin-Akt signaling pathway and AMPK activation. Kazinol B has the potential for diabetes mellitus research.

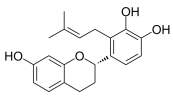


Purity: >98%
Clinical Data: No Development Reported
Size: 5 mg, 10 mg, 25 mg

Kazinol U

Cat. No.: HY-N3425

Kazinol U inhibits melanogenesis through the inhibition of tyrosinase-related proteins via **AMPK** activation.

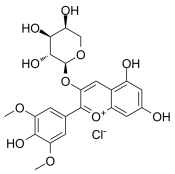


Purity: >98%
Clinical Data: No Development Reported
Size: 5 mg, 10 mg, 25 mg

Malvidin-3-O-arabinoside chloride

Cat. No.: HY-N9349

Malvidin-3-O-arabinoside chloride ameliorates ethyl carbamate-induced oxidative damage by stimulating AMPK-mediated **autophagy**.

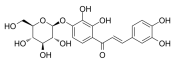


Purity: >98%
Clinical Data: No Development Reported
Size: 5 mg, 10 mg, 25 mg

Marein

Cat. No.: HY-N7676

Marein has the neuroprotective effect due to a reduction of damage to mitochondria function and activation of the **AMPK signal pathway**.

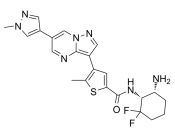


Purity: 99.49%
Clinical Data: No Development Reported
Size: 5 mg

MARK-IN-1

Cat. No.: HY-101933

MARK-IN-1 is a potent microtubule affinity regulating kinase (**MARK**) inhibitor with an IC_{50} of <0.25 nM.

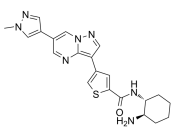


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

MARK-IN-4

Cat. No.: HY-112266

MARK-IN-4 is a potent microtubule affinity regulating kinase **(MARK)** inhibitor with an IC_{50} of 1 nM. Inhibition of microtubule affinity regulating kinase (MARK) represents a potentially attractive means of arresting neurofibrillary tangle pathology in Alzheimer's disease.

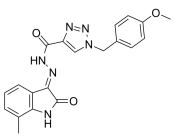


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

MARK4 inhibitor 1

Cat. No.: HY-114317

MARK4 inhibitor 1 is a potent **microtubule affinity-regulating kinase 4 (MARK4)** inhibitor, with an IC_{50} of 1.54 μM. MARK4 inhibitor 1 inhibits cancer cell proliferation, metastasis and induces apoptosis.



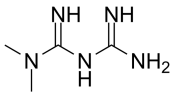
Purity: 98.29%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

Metformin

(1,1-Dimethylbiguanide)

Cat. No.: HY-B0627

Metformin (1,1-Dimethylbiguanide) inhibits the **mitochondrial respiratory chain** in the liver, leading to activation of **AMPK**, enhancing insulin sensitivity for type 2 diabetes research. Metformin can cross the blood-brain barrier and triggers **autophagy**.



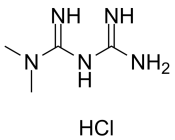
Purity: ≥97.0%
Clinical Data: Launched
Size: 10 mM × 1 mL, 10 mg, 25 mg

Metformin hydrochloride

(1,1-Dimethylbiguanide hydrochloride)

Cat. No.: HY-17471A

Metformin hydrochloride (1,1-Dimethylbiguanide hydrochloride) inhibits the **mitochondrial respiratory chain** in the liver, leading to activation of **AMPK**, enhancing insulin sensitivity for type 2 diabetes research. Metformin hydrochloride triggers **autophagy**.



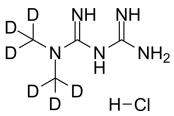
Purity: 99.89%
Clinical Data: Launched
Size: 10 mM × 1 mL, 10 mg, 25 mg

Metformin-d6 hydrochloride

(1,1-Dimethylbiguanide-d6 hydrochloride)

Cat. No.: HY-110228

Metformin D6 hydrochloride is a deuterium labeled Metformin hydrochloride. Metformin hydrochloride inhibits the **mitochondrial respiratory chain** in the liver, leading to activation of **AMPK**, enhancing insulin sensitivity for type 2 diabetes research.



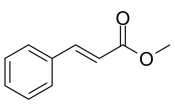
Purity: ≥98.0%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

Methyl cinnamate

(Methyl 3-phenylpropenoate)

Cat. No.: HY-W017212

Methyl cinnamate (Methyl 3-phenylpropenoate), an active component of Zanthoxylum armatum, is a widely used natural flavor compound. Methyl cinnamate (Methyl 3-phenylpropenoate) possesses antimicrobial activity and is a **tyrosinase** inhibitor that can prevent food browning.

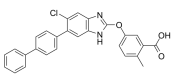


Purity: 99.39%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 500 mg

MK-3903

Cat. No.: HY-107988

MK-3903 is a potent and selective **AMP-activated protein kinase** (**AMPK**) activator with an EC_{50} of 8 nM.

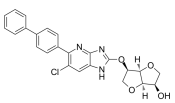


Purity: 98.13%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

MK8722

Cat. No.: HY-111363

MK8722 is a potent and systemic **pan-AMPK** activator.



Purity: 99.37%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

MOTS-c(human) acetate

Cat. No.: HY-P2048A

MOTS-c(human) acetate is a mitochondrial-derived peptide. MOTS-c(human) acetate induces the accumulation of AMP analog **AICAR**, increases activation of **AMPK** and expression of its downstream **GLUT4**.

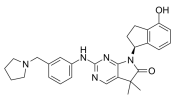
MRWQEMGYIFYPRKLR (acetate salt)

Purity: 99.57%
Clinical Data: No Development Reported
Size: 10 mg, 50 mg, 100 mg

MRT199665

Cat. No.: HY-120877

MRT199665 is a potent and ATP-competitive, selective **MARK/SIK/AMPK** inhibitor with IC_{50}s of 2/2/3/2 nM, 10/10 nM, and 110/12/43 nM for **MARK1/MARK2/MARK3/MARK14**, **AMPKα1/AMPKα2**, and **SIK1/SIK2/SIK3**, respectively.

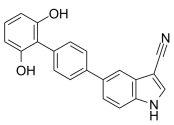


Purity: 99.73%
Clinical Data: No Development Reported
Size: 5 mg, 10 mg, 25 mg, 50 mg

MT 63-78

Cat. No.: HY-W058849

MT 63-78 is a specific and potent direct **AMPK** activator with an EC_{50} of 25 μM. MT 63–78 also induces cell mitotic arrest and **apoptosis**. MT 63-78 blocks prostate cancer growth by inhibiting the lipogenesis and **mTORC1** pathways. MT 63-78 has antitumor effects.



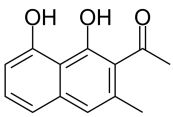
Purity: 98.22%
Clinical Data: No Development Reported
Size: 5 mg, 10 mg

Nepodin

(Musizin)

Cat. No.: HY-N5018

Nepodin (Musizin) is a **quinone oxidoreductase (PfNDH2)** inhibitor isolate from Rumex crispus.Nepodin (Musizin) stimulates the translocation of GLUT4 to the plasma membrane by activation of AMPK.Nepodin (Musizin) has antidiabetic and antimalarial activities.

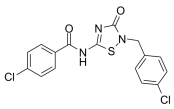


Purity: 99.50%
Clinical Data: No Development Reported
Size: 5 mg, 10 mg

O-304

Cat. No.: HY-112233

O-304 is a first-in-class, orally available pan-**AMPK** activator, which increases AMPK activity by suppressing the dephosphorylation of pAMPK. O-304 exhibits a great potential as a drug to treat type 2 diabetes (T2D) and associated cardiovascular complications .

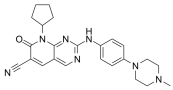


Purity: 99.53%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

ON123300

Cat. No.: HY-12624

ON123300, a strong and brain-penetrant multi-kinase inhibitor, inhibits **CDK4** (IC_{50}=3.9 nM), **Ark5** (IC_{50}=5 nM), **PDGFRβ** (IC_{50}=26 nM), **FGFR1** (IC_{50}=26 nM), **RET** (IC_{50}=9.2 nM), and **FYN** (IC_{50}=11 nM).



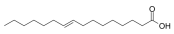
Purity: 99.34%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

Palmitelaidic Acid

(9-trans-Hexadecenoic acid; trans-Palmitoleic acid)

Cat. No.: HY-N2341

Palmitelaidic Acid (9-trans-Hexadecenoic acid) is the trans isomer of palmitoleic acid. Palmitoleic acid is one of the most abundant fatty acids in serum and tissue.

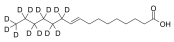


Purity: ≥98.0%
Clinical Data: No Development Reported
Size: 10 mg (393 mM * 100 μL in Ethanol),

Palmitelaidic acid-d13

Cat. No.: HY-N2341S

Palmitelaidic acid-d13 is the deuterium labeled Palmitelaidic Acid. Palmitelaidic Acid (9-trans-Hexadecenoic acid) is the trans isomer of palmitoleic acid. Palmitoleic acid is one of the most abundant fatty acids in serum and tissue.

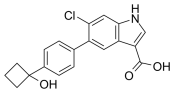


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

PF-06409577

Cat. No.: HY-103683

PF-06409577 is a potent and selective allosteric activator of **AMPK** α1β1γ1 isoform with an EC_{50} of 7 nM.

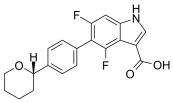


Purity: 99.46%
Clinical Data: Phase 1
Size: 10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

PF-06679142

Cat. No.: HY-120270

PF-06679142 (Compound 10) is a potent, orally active **AMPK** activator with an EC_{50} of 22 nM against **α1β1γ1-AMPK**. PF-06679142 can be used for diabetic nephropathy research.



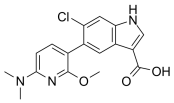
Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

PF-06685249

(PF-249)

Cat. No.: HY-117623

PF-06685249 (PF-249) is a potent and orally active allosteric **AMPK** activator with an EC_{50} of 12 nM for recombinant AMPK α1β1γ1. PF-06685249 can be used for diabetic nephropathy research.



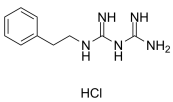
Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

Phenformin hydrochloride

(Phenethylbiguanide hydrochloride)

Cat. No.: HY-16397A

Phenformin hydrochloride is an anti-diabetic drug from the biguanide class, can activate **AMPK** activity.

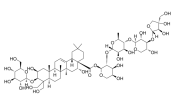


Purity: 98.12%
Clinical Data: Launched
Size: 10 mM × 1 mL, 500 mg, 1 g, 5 g

Platycodin D

Cat. No.: HY-N1411

Platycodin D is a saponin isolated from Platycodi Radix, acts as an activator of **AMPKα**, with anti-obesity property.

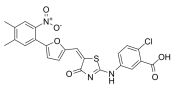


Purity: 98.34%
Clinical Data: No Development Reported
Size: 5 mg, 10 mg, 20 mg

PT1

Cat. No.: HY-103239

PT1 is an **AMPKα1** activator that directly activates the inactive truncated forms of AMPKα1 monomers.

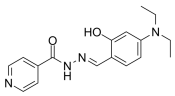


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

RSVA405

Cat. No.: HY-103238

RSVA405 is a potent, orally active activator of **AMPK**, with an EC_{50} of 1 μM. RSVA405 facilitates CaMKKβ-dependent activation of AMPK, inhibits **mTOR**, and promotes **autophagy** to increase Aβ degradation.



Purity: 99.56%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

SAMS

Cat. No.: HY-P0136

SAMS peptide is a specific substrate for the AMP-activated protein kinase (**AMPK**).

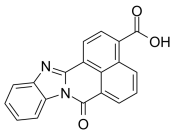
HMRSAMSGLHLVKRR-NH_2

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

STO-609

Cat. No.: HY-19805

STO-609 is a selective and cell-permeable inhibitor of the Ca^{2+}/calmodulin-dependent protein kinase kinase (**CaM-KK**), with K_i values of 80 and 15 ng/mL for recombinant CaM-KKα and CaM-KKβ, respectively.

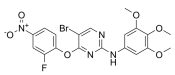


Purity: 98.13%
Clinical Data: No Development Reported
Size: 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

ULK1-IN-2

Cat. No.: HY-143466

ULK1-IN-2 (compound 3s) is a potent **ULK1** inhibitor. ULK1-IN-2 shows highest cytotoxic effect against cancer cell lines, with IC_{50} of 1.94 μM in A549. ULK1-IN-2 can induce apoptosis and simultaneously block autophagy, and can be used to study NSCLC (Non-small cell lung cancer).

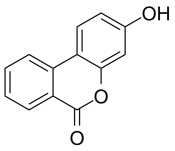


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

Urolithin B

Cat. No.: HY-126307

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

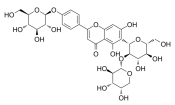


Purity: 99.86%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 10 mg, 50 mg, 100 mg

Vaccarin

Cat. No.: HY-N1419

Vaccarin is an active flavonoid glycoside associated with various biological functions. Vaccarin significantly promote wound healing and endothelial cells and fibroblasts proliferation in the wound site.

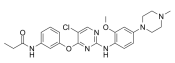


Purity: 99.35%
Clinical Data: No Development Reported
Size: 5 mg, 10 mg, 20 mg

WZ4003

Cat. No.: HY-15802

WZ4003 is the first potent and highly specific **NUAK kinase** inhibitor with IC_{50} of 20 nM/100 nM for NUAK1 (ARK5)/NUAK2, without significant inhibition on other 139 kinases.

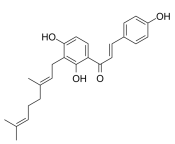


Purity: 98.88%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg

Xanthoangelol

Cat. No.: HY-111588

Xanthoangelol, extracted from Angelica keiskei, suppresses obesity-induced inflammatory responses. Xanthoangelol possesses antibacterial activity. Xanthoangelol inhibits monoamine oxidases. Xanthoangelol induces apoptosis in neuroblastoma and leukemia cells.



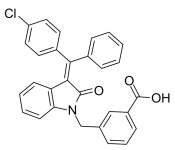
Purity: 98.36%
Clinical Data: No Development Reported
Size: 1 mg

YLF-466D

(C24)

Cat. No.: HY-15840

YLF-466D is a newly developed **AMPK** activator, which inhibits platelet aggregation.

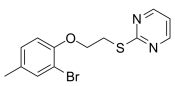


Purity: 99.54%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

ZLN024

Cat. No.: HY-16708

ZLN024 is an **AMPK** allosteric activator. ZLN024 directly activates recombinant AMPK α1β1γ1, AMPK α2β1γ1, AMPK α1β2γ1 and AMPK α2β2γ1 heterotrimer with **EC_{50}**s of 0.42 μM, 0.95 μM, 1.1 μM and 0.13 μM, respectively.

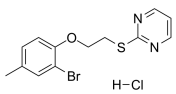


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

ZLN024 hydrochloride

Cat. No.: HY-16708A

ZLN024 hydrochloride is an **AMPK** allosteric activator. ZLN024 directly activates recombinant AMPK α1β1γ1, AMPK α2β1γ1, AMPK α1β2γ1 and AMPK α2β2γ1 heterotrimer with **EC_{50}**s of 0.42 μM, 0.95 μM, 1.1 μM and 0.13 μM, respectively.



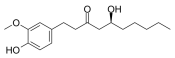
Purity: 98.54%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg

[6]-Gingerol

((S)-(+)-[6]Gingerol; 6-Gingerol)

Cat. No.: HY-14615

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



Purity: 99.54%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg