Myosin

Myosins are mechanoenzymes that interact with actin filaments and hydrolyse ATP to generate movement and force. This enables myosins to propel the sliding of actin filaments, to produce tension on actin filaments and to walk along these filaments. As a result, myosins can regulate the structure and dynamics of the actin cytoskeleton and affect the localization and transport of cellular components. The different myosins are grouped into classes on the basis of their motor domains. There are 35 known classes of myosin, and humans have 40 myosin genes that fall into 13 classes (I, II, III, V, VI, VII, IX, X, XV, XVI, XVIII, XIX and XXXV).

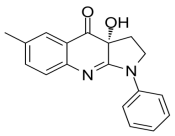
Myosins are actin-dependent motors that participate in a diverse range of crucial activities, including muscle contraction, intracellular trafficking, cell division, motility, actin cytoskeletal organisation and cell signaling. Myosin malfunction has been implicated in a variety of disorders including deafness, hypertrophic cardiomyopathy, Usher syndrome, Griscelli syndrome and cancer.

Myosin light chain kinase (MLCK) is an enzyme that activates the myosin light chain to exert its function related to cytoskeleton contraction and tight junction regulation. In most cells, MLCK is a transducer for signalling MLC phosphorylation in response to Ca^{2+} binding to MLCK-associated calmodulin. MLCK-mediated MLC phosphorylation and actomyosin contractility is important in muscle contraction, cell migration, and endo/exocytic processes, and is recognized for its central role in signalling endothelial cell-cell adhesion and barrier function.

(+)-Blebbistatin

Cat. No.: HY-107657

(+)-Blebbistatin is the inactive enantiomer of (–)-Blebbistatin. (–)-Blebbistatin is a selective inhibitor of myosin II ATPase.



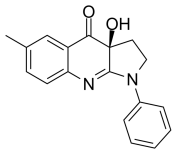
Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

(-)-Blebbistatin

((S)-(-)-Blebbistatin)

Cat. No.: HY-13441

(-)-Blebbistatin is a selective inhibitor of the ATPase activity of non-muscle **myosin II**.



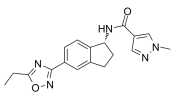
Purity: 99.42%
Clinical Data: No Development Reported
Size: 5 mg, 10 mg, 50 mg

Aficamten

(CK-274; CK-3773274)

Cat. No.: HY-139465

Aficamten (CK-274) is a potent **cardiac myosin** inhibitor with an IC_{50} of 1.4 μM. Aficamten can be used for the research of hypertrophic cardiomyopathy (HCM).

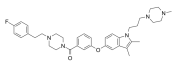


Purity: 99.86%
Clinical Data: No Development Reported
Size: 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

ATM-3507

Cat. No.: HY-100948

ATM-3507 is a potent **tropomyosin** inhibitor with IC_{50}s from 3.83-6.84 μM in human melanoma cell lines.

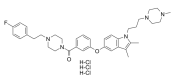


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

ATM-3507 trihydrochloride

Cat. No.: HY-100948B

ATM-3507 trihydrochloride is a potent **tropomyosin** inhibitor with IC_{50}s from 3.83-6.84 μM in human melanoma cell lines.

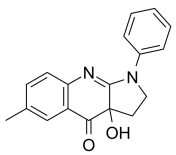


Purity: 98.10%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

Blebbistatin

Cat. No.: HY-13813

Blebbistatin is a selective **non-muscle myosin II (NMII)** inhibitor, promotes directional migration of corneal endothelial cells (CECs) and accelerates wound healing, and better preserves cell junctional integrity and barrier function.



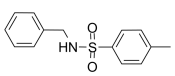
Purity: 99.64%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg

BTS

(N-Benzyl-p-toluenesulfonamide; N-Tosylbenzylamine)

Cat. No.: HY-16690

BTS (N-Benzyl-p-toluenesulfonamide) is a potent and selective inhibitor of **skeletal muscle myosin II subfragment 1 (S1) ATPase** activity, with an IC_{50}s of ~5 μM for actin- and Ca^{2+}-stimulated myosin S1 ATPase. BTS specifically inhibits the contraction of fast skeletal muscle fibers.



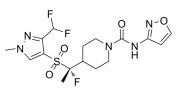
Purity: 99.51%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 500 mg

Danicamtiv

(MYK-491)

Cat. No.: HY-109128

Danicamtiv (MYK-491), an inotropic agent, is a selective allosteric activator of **cardiac myosin**. Danicamtiv increases cardiac systolic function and preserves mechanical efficiency.

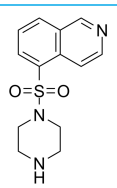


Purity: 99.49%
Clinical Data: Phase 2
Size: 10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

HA-100

Cat. No.: HY-100984

HA-100 is a potent **protein kinase** inhibitor, with IC_{50}s of 4 μM, 8 μM, 12 μM and 240 μM for **cGMP-dependent protein kinase (PKG)**, **cAMP-dependent protein kinase (PKA)**, **protein kinase C (PKC)** and **MLC-kinase**, respectively. HA-100 also used as a **ROCK** inhibitor.

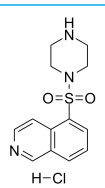


Purity: 99.77%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

HA-100 hydrochloride

Cat. No.: HY-100984A

HA-100 hydrochloride is a potent **protein kinase** inhibitor, with IC_{50}s of 4 μM, 8 μM, 12 μM and 240 μM for cGMP-dependent protein kinase (**PKG**), cAMP-dependent protein kinase (**PKA**), protein kinase C (**PKC**) and **MLC-kinase**, respectively.



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

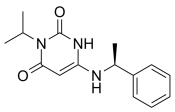
Tel: 609-228-6898 Fax: 609-228-5909 Email: sales@MedChemExpress.com

Mavacamten

(MYK461; SAR439152)

Cat. No.: HY-109037

Mavacamten (MYK461) is an orally active modulator of **cardiac myosin**, with IC_{50}s of 490, 711 nM for bovine cardiac and human cardiac, respectively.

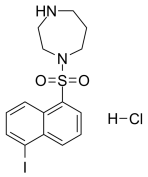


Purity: 99.90%
Clinical Data: Phase 3
Size: 10 mM × 1 mL, 1 mg, 5 mg, 10 mg, 25 mg, 50 mg

ML-7 hydrochloride

Cat. No.: HY-15417

ML-7 hydrochloride is a naphthalene sulphonamide derivative, potently inhibits **MLCK** (IC_{50}=300 nM). ML-7 hydrochloride also inhibits **YAP/TAZ**.

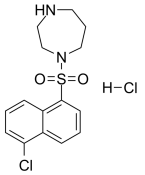


Purity: 99.75%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 10 mg, 50 mg

ML-9

Cat. No.: HY-100932

ML-9 is a selective and potent inhibitor of **Akt kinase**, inhibits myosin light-chain kinase (MLCK) and stromal interaction molecule 1 (STIM1) activity. ML-9 inhibits inhibits MLCK, PKA and PKC activity with K_i values of 4, 32 and 54 μM, respectively.

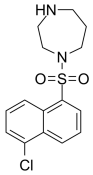


Purity: 99.89%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 25 mg, 50 mg, 100 mg, 250 mg

ML-9 Free Base

Cat. No.: HY-100932A

ML-9 (Free Base) is a selective and potent inhibitor of **Akt kinase**, inhibits myosin light-chain kinase (MLCK) and stromal interaction molecule 1 (STIM1) activity.



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

MLCK inhibitor peptide 18

Cat. No.: HY-P1029

MLCK inhibitor peptide 18 is a myosin light chain kinase (**MLCK**) inhibitor with an IC_{50} of 50 nM, and inhibits **CaM kinase II** only at 4000-fold higher concentrations.

RKKYKYRRK-NH_2

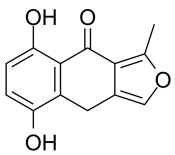
Purity: 99.66%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg, 10 mg, 25 mg

MS-444

(BE-34776)

Cat. No.: HY-100685

MS-444 inhibits the activity of purified smooth muscle myosin light chain kinase (**MLCK**) with an IC_{50} value of 10 μM.

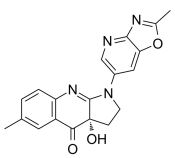


Purity: 99.42%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg

MT-134

Cat. No.: HY-141810

MT-134 is a **SkMII**-specific inhibitor and has excellent exposure in muscles.



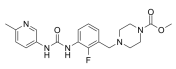
Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

Omecamtiv mecarbil

(CK-1827452)

Cat. No.: HY-14233

Omecamtiv mecarbil (CK-1827452) is a selective **cardiac myosin** activator.



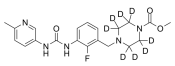
Purity: 98.89%
Clinical Data: Phase 3
Size: 10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

Omecamtiv mecarbil-d8

(CK-1827452-d8)

Cat. No.: HY-14233S

Omecamtiv mecarbil-d8 (CK-1827452-d8) is the deuterium labeled Omecamtiv mecarbil. Omecamtiv mecarbil (CK-1827452) is a selective **cardiac myosin** activator.

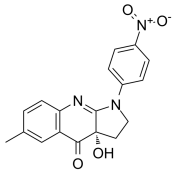


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

para-Nitroblebbistatin

Cat. No.: HY-120870

para-Nitroblebbistatin is a non-cytotoxic, photostable, fluorescent and specific **Myosin II** inhibitor, usd in the study of the specific role of myosin II in physiological, developmental, and cell biological studies.



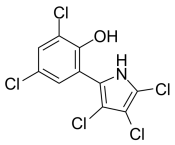
Purity: >98%
Clinical Data: No Development Reported
Size: 500 μg

Pentachloropseudilin

(Antibiotic A 15104 Y; PClP)

Cat. No.: HY-115669

Pentachloropseudilin (Antibiotic A 15104 Y; PClP) is a reversible and allosteric potent inhibitor of **Myo1s** (class 1 myosins) with IC_{50}s range from 1 to 5 μM for mammalian class-1 myosins and greater than 90 μM for class-2 and class-5 myosins.

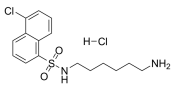


Purity: ≥98.0%
Clinical Data: No Development Reported
Size: 5 mg

W-7 hydrochloride

Cat. No.: HY-100912

W-7 hydrochloride is a selective **calmodulin** antagonist. W-7 hydrochloride inhibits the **Ca^{2+}-calmodulin**-dependent **phosphodiesterase** and **myosin light chain kinase** with IC_{50} values of 28 μM and 51 μM, respectively. W-7 hydrochloride induces **apoptosis** and has antitumor activity.



Purity: 99.65%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 25 mg, 50 mg