Arp2/3 Complex

Actin-related protein 2/3 complex

The Arp2/3 complex is originally identified in Acanthamoeba and consists of seven proteins (actin-related proteins; Arp2 and Arp3, and Arp2/3 complex subunits; ARPC1-5) that are conserved in all eukaryotes, with the exception of some algae, microsporidia and protists. The complex plays an essential role in a wide variety of cellular processes including lamellipodia-mediated cell migration, endocytosis and phagocytosis, by virtue of its ability to generate branched actin filament networks

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Activation of Arp2/3 requires interaction with actin nucleation-promoting factors (NPFs). Regulation of Arp2/3 activity is achieved by endogenous inhibitory proteins through direct binding to Arp2/3 and competition with NPFs or by binding to Arp2/3-induced actin filaments and disassembly of branched actin networks. Arp2/3 inhibition has recently garnered more attention as it has been associated with attenuation of cancer progression, neurotoxic effects during drug abuse, and pathogen invasion of host cells

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Arp2/3 Complex Inhibitors, Activators & Chemicals

187-1, N-WASP inhibitor

Cat. No.: HY-P1045

187-1, N-WASP inhibitor, a 14-aa cyclic peptide, is an allosteric **neural Wiskott-Aldrich syndrome protein (N-WASP)** inhibitor. 187-1, N-WASP inhibitor potently inhibits actin assembly induced by phosphatidylinositol 4,5-bisphosphate (PIP2) with an IC_{50} of 2 μM.

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

187-1, N-WASP inhibitor TFA

Cat. No.: HY-P1045A

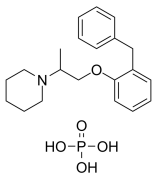
187-1, N-WASP inhibitor TFA, a 14-aa cyclic peptide, is an allosteric **neural Wiskott-Aldrich syndrome protein (N-WASP)** inhibitor.

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

Benproperine phosphate

Cat. No.: HY-114657A

Benproperine phosphate is an orally active, potent **actin-related protein 2/3 complex subunit 2 (ARPC2)** inhibitor. Benproperine phosphate attenuates the actin polymerization rate of action polymerization nucleation by impairing Arp2/3 function.



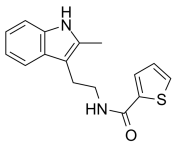
Purity: 99.23%
Clinical Data: Launched
Size: 10 mM × 1 mL, 100 mg

CK-636

(CK-0944636)

Cat. No.: HY-15892

CK-636 is a cell permeable inhibitor of **Arp2/3 complex**, that could inhibit actin polymerization, with IC_{50} values of 4 μM, 24 μM and 32 μM for human, fission yeast and bovine, respectively.

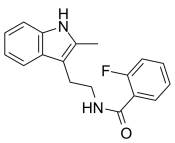


Purity: 98.43%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 10 mg, 50 mg, 100 mg

CK-666

Cat. No.: HY-16926

CK-666 is a cell-permeable actin-related protein **Arp2/3 complex** inhibitor (IC_{50}=12 μM). CK-666 binds to Arp2/3 complex, stabilizes the inactive state of the complex, blocking movement of the Arp2 and Arp3 subunits into the activated filament-like (short pitch) conformation.

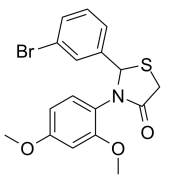


Purity: 99.79%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg

CK-869

Cat. No.: HY-16927

CK-869 is an Actin-Related Protein 2/3 **(ARP2/3)** complex inhibitor, with an IC_{50} of 7 μM.



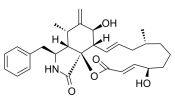
Purity: 99.74%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

Cytochalasin B

(Phomin)

Cat. No.: HY-16928

Cytochalasin B is a cell-permeable mycotoxin binding to the barbed end of **actin** filaments, disrupting the formation of actin polymers, with K_d value of 1.4-2.2 nM for F-actin.



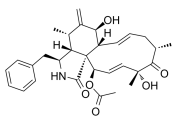
Purity: 99.84%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 1 mg, 5 mg, 10 mg

Cytochalasin D

(Zygosporin A; NSC 209835)

Cat. No.: HY-N6682

Cytochalasin D (Zygosporin A; NSC 209835) is a potent and cell-permeable inhibitor of actin polymerization derived from fungus, inhibits the G-actin–cofilin interaction by binding to G-actin.

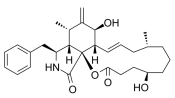


Purity: 99.75%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 1 mg, 5 mg, 10 mg

Dihydrocytochalasin B

Cat. No.: HY-N6701

Dihydrocytochalasin B (H2CB) is a **Cytokinesis** inhibitor and changes the morphology of the cells, similar to that of cytochalasin B; does not inhibit glucose transport.

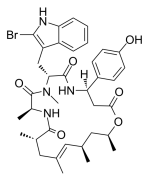


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

Jasplakinolide

Cat. No.: HY-P0027

Jasplakinolide is a potent **actin polymerization** inducer and stabizes pre-existing actin filaments. Jasplakinolide binds to F-actin competitively with phalloidin with a K_d of 15 nM.



Purity: ≥98.0%
Clinical Data: No Development Reported
Size: 100 μg

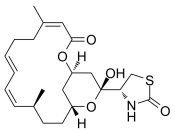
Tel: 609-228-6898 Fax: 609-228-5909 Email: sales@MedChemExpress.com

Latrunculin A

(LAT-A)

Cat. No.: HY-16929

Latrunculin A (LAT-A) is a toxin isolated from the red sea sponge Latrunculia magnifica, binds to actin monomers, inhibits polymerization of actin, with K_ds of 0.1, 0.4, 4.7 μM and 0.19 μM for ATP-actin, ADP-Pi-actin, ADP-actin and G-actin, respectively.



Purity: ≥97.0%
Clinical Data: No Development Reported
Size: 100 μg (237.2 μM * 1 mL in Ethanol)

Phalloidin-TRITC

Cat. No.: HY-P2270

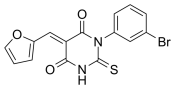
Phalloidin-TRITC is a TRITC labeled, red fluorescence probe for **F-actin**. Phalloidin, bound to actin filaments, reacts covalently with amino acids Glu-IIT, Met-II9, and Met355, which are very close to the nucleotide binding site.

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

SMIFH2

Cat. No.: HY-16931

SMIFH2 is a **formin** specific inhibitor. SMIFH2 inhibits actin polymerization by Formins and affects the actin cytoskeleton.

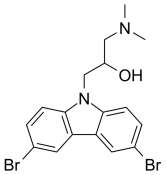


Purity: 98.22%
Clinical Data: No Development Reported
Size: 5 mg, 10 mg, 50 mg, 100 mg

Wiskostatin

Cat. No.: HY-12534

Wiskostatin is a potent and selective inhibitor of neuronal Wiskott-Aldrich syndrome protein (N-WASP)-mediated actin polymerization. Wiskostatin causes a rapid, profound, and irreversible decrease in cellular ATP levels.



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