Smo

Smoothened

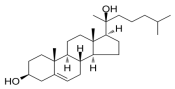
Smoothened is a G protein-coupled receptor protein encoded by the SMO gene of the hedgehog signaling pathway conserved from flies to humans. It is the molecular target of the teratogen cyclopamine. Cellular localization plays an essential role in the function of SMO. Stimulation of the patched receptor by the sonic hedgehog ligand leads to translocation of SMO to the primary cilium. Furthermore, SMO that is mutated in the domain required for ciliary localisation cannot contribute to pathway activation.[3] SMO has also been shown to bind the kinesin motor protein Costal-2 and play a role in the localization of the Ci (Cubitus interruptus transcription factor) complex. SMO can function as an oncogene. Activating SMO mutations can lead to unregulated activation of the hedgehog pathway and cancer.

Smo Inhibitors, Agonists, Antagonists & Activators

20(S)-Hydroxycholesterol
(20α-Hydroxycholesterol)

Cat. No.: HY-12316

20(S)-hydroxyCholesterol (20α-Hydroxycholesterol) is an allosteric activator of the **oncoprotein smoothened (Smo)** that activates the hedgehog (Hh) signaling pathway with an EC_{50} of 3 μM in a gene transcription reporter assay using NIH3T3 cells.

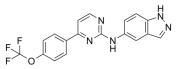


Purity: 98.07%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg

ALLO-2

Cat. No.: HY-117407

ALLO-2 is a potent drug-resistant **Smoothened (Smo)** mutant antagonist that inhibits Smo agonist Hh-Ag1.5-induced luciferase expression in TM3-Gli-Luc cells with IC_{50} of 6 nM.

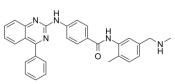


Purity: 99.58%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

BMS-833923
(XL-139)

Cat. No.: HY-13809

BMS-833923 (XL-139) is an orally bioavailable small-molecule inhibitor of Smoothened with potential antineoplastic activity; inhibits BODIPY cyclopamine binding to SMO in a dose-dependent manner with an IC50 of 21 nM.

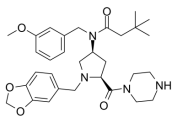


Purity: 98.21%
Clinical Data: Phase 2
Size: 10 mM × 1 mL, 10 mg, 50 mg, 100 mg

CUR61414

Cat. No.: HY-113965

CUR61414 is a novel, potent and cell permeable **Hedgehog signaling pathway inhibitor** (IC_{50} =100-200 nM). CUR61414 is a small-molecule aminoproline class compound and selectively binds to **smoothened (Smo)** with a K_i value of 44 nM.

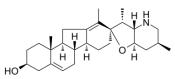


Purity: >99.0%
Clinical Data: No Development Reported
Size: 10 mg

Cyclopamine
(11-Deoxojervine)

Cat. No.: HY-17024

Cyclopamine is a **Hedgehog** (**Hh**) pathway antagonist with an IC_{50} of 46 nM in the Hh cell assay. Cyclopamine is also a selective **Smo** inhibitor.

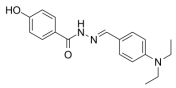


Purity: 99.97%
Clinical Data: No Development Reported
Size: 5 mg, 10 mg, 50 mg, 100 mg

DY131
(GSK 9089)

Cat. No.: HY-15483

DY131 (GSK 9089) is a potent and selective **ERRγ** and **ERRβ** agonist. DY131displays inactive against ERRα, ERα and ERβ. DY131 also inhibits **Smo** signaling.

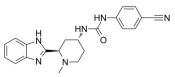


Purity: 99.72%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 10 mg, 50 mg

Glasdegib
(PF-04449913)

Cat. No.: HY-16391

Glasdegib (PF-04449913) is a potent and orally bioavailable **smoothened** inhibitor. Glasdegib (PF-04449913) binds to human **SMO** (amino acids 181-787) with an IC_{50} of 4 nM.

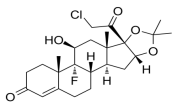


Purity: 99.31%
Clinical Data: Launched
Size: 10 mM × 1 mL, 10 mg, 50 mg, 100 mg

Halcinonide
(SQ-18566)

Cat. No.: HY-B0877

Halcinonide (SQ-18566) is a high potency corticosteroid used topically in the treatment of certain skin conditions.

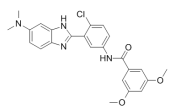


Purity: 99.87%
Clinical Data: Launched
Size: 10 mM × 1 mL, 10 mg, 50 mg, 100 mg, 200 mg

HhAntag

Cat. No.: HY-15412

HhAntag is a specific, potent and orally active small molecule **SMO** antagonist of the Hh pathway.

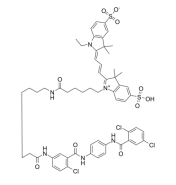


Purity: 98.70%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

IHR-Cy3

Cat. No.: HY-131016

IHR-Cy3 is a potent fluorescent **Smo** antagonist with an IC_{50} of 100 nM.



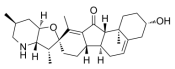
Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

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

Jervine

(11-Ketocyclopamine) Cat. No.: HY-N0836

Jervine (11-Ketocyclopamine) is a potent **Hedgehog (Hh)** inhibitor with an IC_{50} of 500-700 nM. Jervine is a natural teratogenic sterodial alkaloid from rhizomes of Veratrum album. Jervine has anti-inflammatory and antioxidant properties.

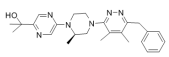


Purity: 99.53%
Clinical Data: No Development Reported
Size: 5 mg, 10 mg, 50 mg, 100 mg

LEQ506

(NVP-LEQ506) Cat. No.: HY-18636

LEQ506 is a second-generation inhibitor of **smoothened** (**Smo**) with IC_{50}s of 2 and 4 nM in human and mouse, respectively.

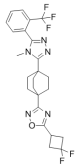


Purity: 98.27%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg, 10 mg

MK-4101

Cat. No.: HY-100036

MK-4101 is a **Smoothened (SMO)** antagonist (IC_{50} of 1.1 μM for 293 cells) and also a potent inhibitor of the **hedgehog pathway** (IC_{50} of 1.5 μM for mouse cells; IC_{50} of 1 μM for KYSE180 oesophageal cancer cells).

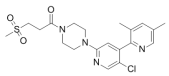


Purity: 98.31%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 2 mg, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

PF-5274857

Cat. No.: HY-13459

PF-5274857 is a potent, selective, orally active and brain-penetrant antagonist of **Smo**, with an IC_{50} of 5.8 nM and K_i of 4.6 nM. PF-5274857 has potential for research of tumor types including brain tumors and brain metastasis driven by an activated Hh pathway.

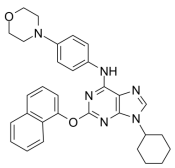


Purity: 98.12%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

Purmorphamine

(Shh Signaling Antagonist VI) Cat. No.: HY-15108

Purmorphamine (Shh Signaling Antagonist VI) is a **smoothened receptor** agonist with an EC_{50} of 1 μM.

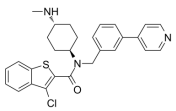


Purity: 99.89%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg

SAG

Cat. No.: HY-12848

SAG is a potent **Smoothened (Smo) receptor** agonist (EC_{50}=3 nM; K_d=59 nM). SAG activates the Hedgehog signaling pathway and counteracts Cyclopamine (HY-17024) inhibition of Smo.

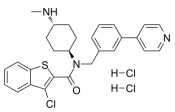


Purity: 99.88%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 1 mg, 5 mg, 10 mg, 25 mg, 50 mg

SAG dihydrochloride

Cat. No.: HY-12848C

SAG dihydrochloride is a potent **Smoothened (Smo) receptor** agonist (EC_{50}=3 nM; K_d=59 nM). SAG dihydrochloride activates the Hedgehog signaling pathway and counteracts Cyclopamine (HY-17024) inhibition of Smo.

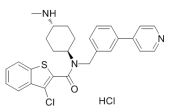


Purity: >98%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 1 mg, 5 mg, 10 mg, 50 mg

SAG hydrochloride

Cat. No.: HY-12848B

SAG hydrochloride is a potent **Smoothened (Smo) receptor** agonist (EC_{50}=3 nM; K_d=59 nM). SAG hydrochloride activates the Hedgehog signaling pathway and counteracts Cyclopamine (HY-17024) inhibition of Smo.

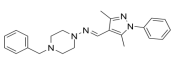


Purity: 99.98%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 1 mg, 5 mg, 10 mg, 25 mg, 50 mg

SANT-1

Cat. No.: HY-100224

SANT-1, a potent **Smo** antagonist, inhibits **Hedgehog** signaling. SANT-1 shows IC_{50}s of 20 nM and 30 nM in Shh-LIGHT2 and SmoA1-LIGHT2 assay, respectively.

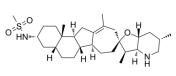


Purity: 99.85%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

Saridegib

(IPI-926; Patidegib) Cat. No.: HY-16587

Saridegib is a potent and specific inhibitor of Smoothened **(Smo)**, a key signaling transmembrane protein in the Hedgehog (Hh) pathway.

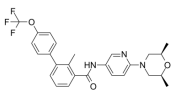


Purity: >99.0%
Clinical Data: Phase 3
Size: 10 mM × 1 mL, 5 mg, 10 mg

Sonidegib

(Erismodegib; LDE225; NVP-LDE225) **Cat. No.:** HY-16582A

Sonidegib (Erismodegib) is a potent and selective **Smo** antagonist with IC_{50} of 1.3 nM and 2.5 nM for mouse and human Smo in binding assay, respectively.

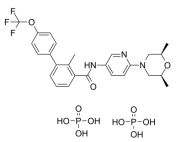


Purity: 99.64%
Clinical Data: Launched
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

Sonidegib diphosphate (Erismodegib diphosphate; LDE225 diphosphate; NVP-LDE225 diphosphate)

Cat. No.: HY-16582

Sonidegib diphosphate (Erismodegib diphosphate) is a potent and selective **Smo** antagonist with IC_{50} of 1.3 nM and 2.5 nM for mouse and human Smo in binding assay, respectively.

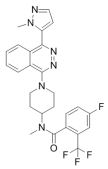


Purity: 99.83%
Clinical Data: Launched
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

Taladegib

(LY2940680) **Cat. No.:** HY-13242

Taladegib (LY2940680) is an antagonist of the **smoothened** receptor.



Purity: 99.93%
Clinical Data: Phase 2
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg