

Hedgehog Pathway

The Hedgehog signaling pathway plays a pivotal role in the development of all bilaterally symmetric organisms. Additionally, hedgehog pathway proteins are involved in the regulation of adult stem cells and maintenance and regeneration of adult tissues. The pathway has been implicated in the development of some cancers, including basal cell carcinomas, making hedgehog pathway proteins attractive targets for the development of new anti-cancer drugs.

HPI-1

HPI-1 is a Hedgehog pathway inhibitor acting downstream of Smo and independently of PKA, PI3K and MAPK.¹

Product No: 10-4522 5 mg/ 25 mg/

SAG

Smoothed agonist which binds directly to SMO and can block SMO inhibition by cyclopamine. It should be noted that SAG inhibits hedgehog signaling at concentrations greater than 1 μ M (EC50 for SMO activation is \sim 3 nM).²

Product No: 10-4525 1 mg/ 5 mg/

Vismodegib

Inhibits Sonic Hedgehog pathway signaling by blocking the activity of Smoothed. Inhibition of SHH leads to decreased cell viability and induction of apoptosis in a variety of cancer cell lines and in pancreatic cancer stem cells.³

Product No: 10-2182 5 mg/ 25 mg/

Cyclopamine

Naturally occurring steroidal alkaloid with teratogenic activity. Blocks sonic hedgehog signaling by binding to smoothed.⁴

Product No: 10-1082 5 mg/ 25 mg/

CUR 61414

Novel Hedgehog signaling pathway inhibitor (IC₅₀=100-200 nM).⁵ Selectively binds to Smo but not other GPCRs.

Product No: 10-1392 5 mg/ 25 mg/

20-(S)-Hydroxycholesterol

Hedgehog signaling activator⁶ that acts via binding to Smoothed at a site distinct from the cyclopamine binding site.^{7,8}

Product No: 10-4540 1 mg/ 5 mg/

Veratramine

Cyclopamine analog which inhibits hedgehog signaling pathway=dependent proliferation in NIH/3T3 cells.⁹

Product No: 10-1147 5 mg/ 25 mg/

Purmorphamine

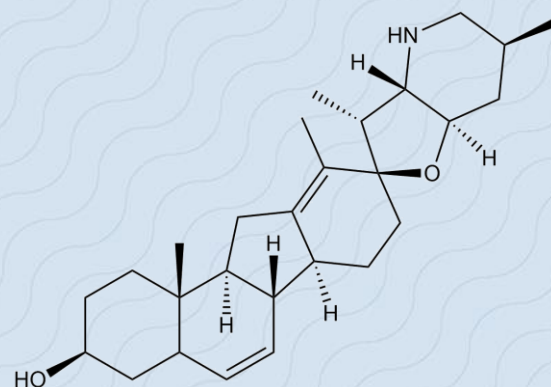
Induces osteogenesis in multipotent mesenchymal progenitor cells via activation of hedgehog signaling.¹⁰ Activation of hedgehog is achieved via direct targeting of Smoothed.¹¹

Product No: 10-4622 5 mg/ 25 mg/

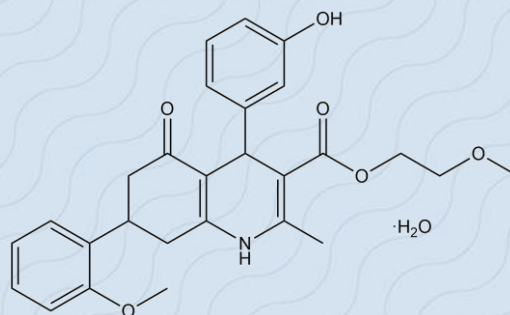
Jervine

Inhibits hedgehog by directing binding to Smoothed.¹² Inhibits the response of target tissues to Sonic hedgehog signaling.¹³

Product No: 10-2388 5 mg/ 25 mg/



Cyclopamine



HPI-1

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