Small Molecules

GSA 10

Hedgehog pathway activator;
Activates Smoothened (SMO)

Catalog # 73172 10 mg
73174 50 mg

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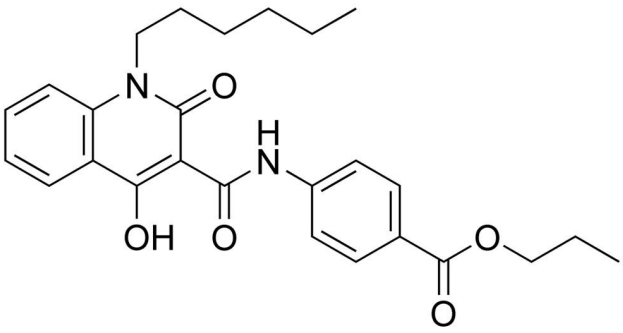
Product Description

GSA 10 is an agonist of smoothened (SMO), a cell surface receptor and mediator of the Hedgehog signaling pathway. It is a quinolinecarboxamide derivative that binds in a distinct binding pocket from cyclopamine. GSA 10 is active at an EC_{50} of 1.2 µM in an alkaline phosphatase-based mouse mesenchymal cell line (C3H10T1/2) differentiation assay (Gorojankina et al.).

Molecular Name:	GSA 10
Alternative Names:	Not applicable
CAS Number:	300833-95-8
Chemical Formula:	$C_{26}H_{30}N_2O_5$
Molecular Weight:	450.5 g/mol
Purity:	≥ 95%
Chemical Name:	4-[[(1-hexyl-1,2-dihydro-4-hydroxy-2-oxo-3-quinolinyl)carbonyl]amino]-benzoic acid, propyl ester
Structure:	

Properties

Physical Appearance:	A crystalline solid
Storage:	Product stable at -20°C as supplied. Protect from prolonged exposure to light. Stable as supplied for 12 months from date of receipt.
Solubility:	· DMF ≤ 2 mM For example, to prepare a 1 mM stock solution in DMF, resuspend 10 mg in 22.2 mL of DMF. Prepare stock solution fresh before use. Information regarding stability of small molecules in solution has rarely been reported, however, as a general guide we recommend storage in DMF at -20°C. Aliquot into working volumes to avoid repeated freeze-thaw cycles. The effect of storage of stock solution on compound performance should be tested for each application. Compound has low solubility in aqueous media. For use as a cell culture supplement, stock solution should be diluted into culture medium immediately before use. Avoid final DMF concentration above 0.1% due to potential cell toxicity.

Published Applications

DIFFERENTIATION
· Promotes differentiation of multipotent mesenchymal progenitor cells into osteoblasts (Gorojankina et al.).

References

Gorojankina T et al. (2013) Discovery, molecular and pharmacological characterization of GSA-10, a novel small-molecule positive modulator of Smoothened. Mol Pharmacol 83(5): 1020–9.

Related Small Molecules

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This product is hazardous. Please refer to the Safety Data Sheet (SDS).