

Small Molecules

HPI-1

Hedgehog pathway inhibitor

Catalog # 72492
72494

5 mg
25 mg



Scientists Helping Scientists™ | WWW.STEMCELL.COM

TOLL FREE PHONE 1 800 667 0322 • PHONE +1 604 877 0713

INFO@STEMCELL.COM • TECHSUPPORT@STEMCELL.COM

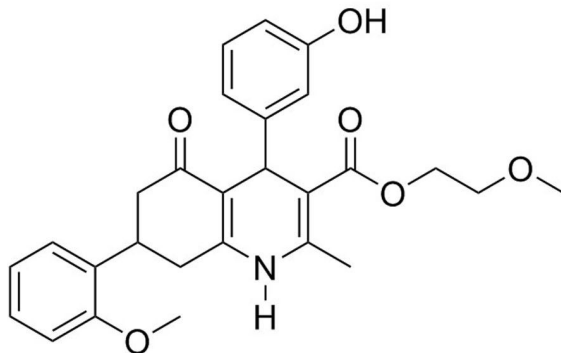
FOR GLOBAL CONTACT DETAILS VISIT OUR WEBSITE

Product Description

HPI-1 is a Hedgehog (HH) pathway inhibitor that suppresses signaling through Sonic Hedgehog (SHH; $IC_{50} = 1.5 \mu M$) without significantly affecting WNT signaling ($IC_{50} \geq 30 \mu M$; Hyman et al.). HPI-1 suppresses HH activation induced by loss of Suppressor of Fused or by GLI overexpression, suggesting action at post-translational modification of GLI protein or at the interaction of GLI with a co-factor (Hyman et al.). HPI-1 also inhibits signaling through the oncogenic Smoothened (SMO) mutant, SMOM2, in neuron precursors, preventing cell proliferation (Hyman et al.).

Molecular Name: HPI-1
Alternative Names: Hedgehog pathway inhibitor 1; 1,4,5,6,7,8-hexahydro-4-(3-hydroxyphenyl)-7-(2-methoxyphenyl)-2-methyl-5-oxo-3-quinolinecarboxylic acid-2-methoxyethyl ester
CAS Number: 599150-20-6
Chemical Formula: $C_{27}H_{29}NO_6$
Molecular Weight: 463.5 g/mol
Purity: > 95%
Chemical Name: 1,4,5,6,7,8-hexahydro-4-(3-hydroxyphenyl)-7-(2-methoxyphenyl)-2-methyl-5-oxo-3-quinolinecarboxylic acid-2-methoxyethyl ester

Structure:



Properties

Physical Appearance: A crystalline solid
Storage: Product stable at $-20^{\circ}C$ as supplied. Protect from prolonged exposure to light. For product expiry date, please contact techsupport@stemcell.com.
Solubility:

- Absolute ethanol ≤ 40 mM
- DMSO ≤ 6.4 mM

For example, to prepare a 10 mM stock solution in absolute ethanol, resuspend 1 mg in 216 μL of absolute ethanol.
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 DMSO at $-20^{\circ}C$. 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 DMSO concentration above 0.1% due to potential cell toxicity.

Published Applications

MAINTENANCE AND SELF-RENEWAL

- Demonstrates the importance of Hedgehog pathway by inhibiting proliferation mediated by the oncogenic Smoothened (SMO) mutant, SMOM2 in cultured cerebellar granule neuron precursor cells (Hyman et al.).

CANCER RESEARCH

- Reduces growth of MDA-MB-231 breast cancer cells (Kwon et al.).

References

Hyman JM et al. (2009) Small-molecule inhibitors reveal multiple strategies for Hedgehog pathway blockade. Proc Natl Acad Sci U S A 106(33): 14132–7.

Kwon Y-J et al. (2011) Gli1 enhances migration and invasion via up-regulation of MMP-11 and promotes metastasis in ER α negative breast cancer cell lines. Clin Exp Metastasis 28(5): 437–49.

Related Small Molecules

For a complete list of small molecules available from STEMCELL Technologies, please visit our website at www.stemcell.com/smallmolecules or contact us at techsupport@stemcell.com.

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

STEMCELL TECHNOLOGIES INC.'S QUALITY MANAGEMENT SYSTEM IS CERTIFIED TO ISO 13485. PRODUCTS ARE FOR RESEARCH USE ONLY AND NOT INTENDED FOR HUMAN OR ANIMAL DIAGNOSTIC OR THERAPEUTIC USES UNLESS OTHERWISE STATED.

Copyright © 2016 by STEMCELL Technologies Inc. All rights reserved including graphics and images. STEMCELL Technologies & Design, STEMCELL Shield Design and Scientists Helping Scientists are trademarks of STEMCELL Technologies Inc. While STEMCELL has made all reasonable efforts to ensure that the information provided by STEMCELL and its suppliers is correct, it makes no warranties or representations as to the accuracy or completeness of such information.