



Vismodegib

Data Sheet

Catalog Number:	MC11108	Product Type:	Small Molecule
Bio-Activity:	Hedgehog signaling pathway inhibitor	CAS #:	879085-55-9
Research Categories:	Cell death, cancer	Chemical Name:	2-Chloro-N-(4-chloro-3-(pyridine-2-yl)phenyl)-4-(methylsulfonyl)benzamide
Solubility:	Soluble in DMSO (up to 200 mg/ml) or in Ethanol (up to 10 mg/ml with warming)	Molecular Formula:	C19H14Cl2N2O3S
Purity:	> 98%	Molecular Weight:	421.30
Format:	Powder	Ship Temp:	Ambient
Storage:	-20°C		

Application Notes

Description/Data:

A potent and selective Hedgehog (Hh) pathway signaling inhibitor antagonizing SMO with a Ki of 1.3 nM) [1]. Alters intracellular Ca²⁺ homeostasis and inhibits growth of cisplatin-resistant lung cancer cells [2]. Inhibits two ABC transporters, ABCG2/BCRP and ABCB1/Pgp, IC₅₀s=1.4 and 3.0 μM respectively [3]. Clinically useful for the treatment of basal cell carcinoma [4]. Inhibits proliferation and induces apoptosis in colon cancer cell lines.

References:

- 1) Rominger et al. (2009), Evidence for allosteric interactions of antagonist binding to the smoothened receptor; *J. Pharmacol. Exp. Therap.*, 329 995
- 2) Tian et al. (2012), the hedgehog pathway inhibitor GDC-0449 alters intracellular Ca²⁺ homeostasis and inhibits cell growth in cisplatin-resistant lung cancer cells; *Anticancer Res.*, 32 89
- 3) Zhang et al. (2009), Hedgehog pathway inhibitor HhAntag691 is a potent inhibitor of ABCG2/BCRP and ABCB1/Pgp; *Neoplasia*, 11 96
- 4) Cirrone and Harris (2012), Vismodegib anf the hedgehog pathway: a new treatment for basal cell carcinoma; *Clin. Ther.*, 34 2039

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5) Wu et al. (2017), Smoothened antagonist GDC-0449 (Vismodegib) inhibits proliferation and triggers apoptosis in colon cancer cell lines; *Exp. Ther. Med.*, 13 2529

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Neuromics Antibodies • 5325 West 74th Street, Suite 8 • Edina, MN 55439
phone 866-350-1500 • fax 612-677-3976 • e-mail: pshuster@neuromics.com