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Hedgehog Agonist Hh-Ag1.5

Chemical Name: 3-chloro-4,7-difluoro-N-(4-(methylamino)cyclohexyl)-N-(3-(pyridin-4-yl)benzyl)benzo[b]thiophene-2-carboxamide

Molecular Weight:	526.04
Formula:	C ₂₈ H ₂₆ ClF ₂ N ₃ OS
Purity:	≥98%
CAS#:	612542-14-0
Solubility:	DMSO up to 50 mM
Storage	Powder: 4°C 1 year
	DMSO: 4°C 3 month
	-20°C 1 year

Biological Activity:

Hh-Ag1.5 is one of the most potent and selective small-molecule agonists of the Hedgehog pathway, targeting Smoothened (Smo) with an $EC_{50} \sim 1$ nM. Studies showed that it has more potent activity than the recombinant Hh protein in activating Smo and hedgehog pathway.

How to Use:

In vitro: Ag1.5 was used at 25 nM to induce Hh pathway activation in the reporter gene assay. It was suggested to use at $0.1 \mu M$ to replace recombinant Hh protein.

In vivo: n/a

Reference:

- 1. Frank-Kamenetsky M, et al. Small-molecule modulators of Hedgehog signaling: identification and characterization of Smoothened agonists and antagonists. (2002) Journal of Biology (1): 10.2-10.19.
- 2. Borzillo GV, et al. The Hedgehog Signaling Pathway as a Target for Anticancer Drug Discovery. (2005) Current Topics in Medicinal Chemistry (5), 147-157.
- 3. Pan S, et al. Discovery of NVP-LDE225, a Potent and Selective Smoothened Antagonist. ACS Med. Chem. Lett., 2010, 1 (3), pp 130–134.

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