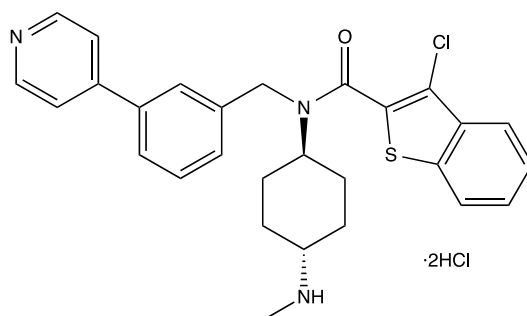


Catalog #10-4525
SAG dihydrochloride

CAS# 364590-63-6

N-Methyl-N'-(3-pyridinylbenzyl)-N'-(3-chlorobenzo[b]thiophene-2-carbonyl)-1,4-diaminocyclohexane dihydrochloride
Lot # FBA1156



SAG is a smoothed agonist which binds directly to SMO and can block SMO inhibition by cyclopamine (Cat.# 10-1082). The conformation of SMO is altered by SAG binding which results in the accumulation of SMO in cilia and activated gene transcription. SAG induces hedgehog pathway activation in a mouse cultured cell assay (EC₅₀ = 3 nM) via binding to smoothed heptahelical bundle (K_D = 59 nM).^{1,2} It should be noted that SAG inhibits hedgehog signaling at concentrations greater than 1 μM (EC₅₀ for SMO activation is ~ 3 nM).¹

- 1) Chen *et al.* (2002) *Small molecule modulation of Smoothed activity* Proc.Natl.Acad.Sci. **99** 14071
- 2) Frank-Kamenetsky *et al.* (2002) *Small-molecule modulators of Hedgehog signaling: identification and characterization of Smoothed agonists and antagonists* J.Biol **1** 10

PHYSICAL DATA

Molecular Weight:	562.98
Molecular Formula:	C ₂₈ H ₂₈ ClN ₃ OS·2HCl
Purity:	>98% by HPLC
	NMR: (Conforms)
Solubility:	DMSO, water
Physical Description:	Off-white solid
Storage and Stability:	Store as supplied at -20°C for up to 1 year from the date of purchase. Solutions in DMSO or distilled water may be stored at -20°C for up to 3 months.

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