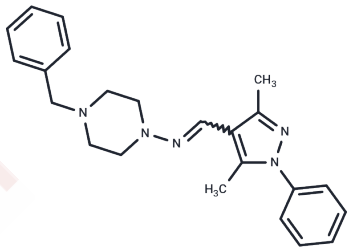
Data Sheet (Cat.No.T2450)

TargetMol

SANT-1

Chemical Properties



CAS No. : 304909-07-7

Formula: C23H27N5

Molecular Weight: 373.49

Storage: Store at low temperature
Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	SANT-1 directly binds to Smoothened (Smo) receptor (Kd: 1.2 nM) and inhibits Smo agonist effects (IC50: 20 nM).
Targets(IC50)	Hedgehog/Smoothened,Smo
In vivo	SANT-1 inhibits the transportation of Smo (stimulated by PKA) to the proximal cilia. It equally suppresses both the wild-type and oncogenic forms of Smo. In SmoA1-LIGHT2 cells, SANT-1 impedes pathway activation, displaying similar efficacy to that observed in the Shh-LIGHT2 experiments. Distinct inhibitory activities of SANT-1 are evident in both Shh-LIGHT2 and BODIPY-Cyclopamine studies, where it notably blocks the SAG-modulated pathway activation. Additionally, when used in combination with SAHA, SANT-1 curtails cell proliferation and effectively inhibits colony formation in the pancreatic cancer cell lines Panc-1 and BxPC-3, offering a counteraction to gemcitabine resistance.
Kinase Assay	CK1 kinase assay: All protein kinase assays (25 μL) are carried out at room temperature (21℃). Assays are performed for 40 min using a Biomek 2000 Laboratory Automation Workstation in a 96-well format. The concentrations of magnesium acetate and [γ-33P] ATP (800 cpm/pmol) in the assays are 10 mM and 0.1 mM, respectively. Assays are initiated with MgATP and stopped by the addition of 5 μL of 0.5 M orthophosphoric acid. Aliquots are then spotted on to P30 ?ltermats, washed four times in 75 mM phosphoric acid to remove ATP, once in methanol, then dried and counted for radioactivity. CK1 δ (5-20 m-units), diluted in 20 mM Hepes, pH 7.5, 0.15 M NaCl, 0.1 mM EGTA, 0.1% (v/v) Triton X-100, 5 mM dithiothreitol, 50% (v/v) glycerol, is assayed against the peptide RRKDLHDDEEDEAMSITA in an incubation containing 20 mM Hepes, pH 7.5, 0.15 M NaCl, 0.1 mM EDTA, 5 mM DTT, 0.1% (v/v) Triton X-100 and 0.5 mM substrate peptide.

Solubility Information

Solubility	DMSO: 18.7 mg/mL (50.07 mM),Sonication is recommended. Ethanol: 9.3 mg/mL (24.9 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (5.35 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.6774 mL	13.3872 mL	26.7745 mL
5 mM	0.5355 mL	2.6774 mL	5.3549 mL
10 mM	0.2677 mL	1.3387 mL	2.6774 mL
50 mM	0.0535 mL	0.2677 mL	0.5355 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

James K. Chen, et al. Proc Natl Acad Sci U S A, 2002, 99(22), 14071-14076.
Ma R, Bi H, Wang Y, et al.Low concentrations of saracatinib promote definitive endoderm differentiation through inhibition of FAK-YAP signaling axis.Cell Communication and Signaling.2024, 22(1): 1-18.
Wilson CW, et al. PLoS One. 2009;4(4):e5182.
Chun SG, et al. Cancer Biol Ther, 2009, 8(14), 1328-1339.