

PRODUCT INFORMATION



SANT 1

Item No. 14933

CAS Registry No.: 304909-07-7
Formal Name: N-[(3,5-dimethyl-1-phenyl-1H-pyrazol-4-yl)methylene]-4-(phenylmethyl)-1-piperazinamine

MF: C₂₃H₂₇N₅

FW: 373.5

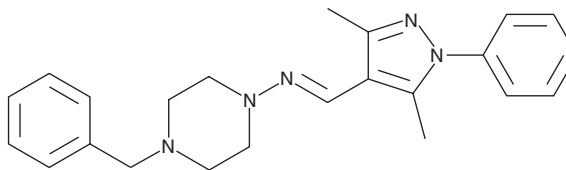
Purity: ≥98%

UV/Vis.: λ_{max}: 284 nm

Supplied as: A crystalline solid

Storage: -20°C

Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

SANT 1 is supplied as a crystalline solid. A stock solution may be made by dissolving the SANT 1 in the solvent of choice, which should be purged with an inert gas. SANT 1 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of SANT 1 in these solvents is approximately 5, 3, and 10 mg/ml, respectively.

Description

Smoothened (SMO) is a GPCR-like receptor which, with Patched, mediates hedgehog signaling to regulate gene expression through the Gli transcription factors.¹ SANT 1 is a potent inhibitor of hedgehog signaling that acts by directly antagonizing SMO (IC₅₀ = 20 nM).² It counteracts SMO activation by the SMO agonist SAG but only partially competes with SAG binding to SMO.^{2,3} SANT 1 targets inactive SMO while it is in the cytoplasm, before it relocates to the primary cilium and is activated.⁴ Through antagonism of SMO, SANT 1 represses Gli-mediated transcription in a variety of cell types.^{4,5}

References

1. Ruiz-Gómez, A., Molnar, C., Holguín, H., *et al.* The cell biology of Smo signalling and its relationships with GPCRs. *Biochim. Biophys. Acta* **1768(4)**, 901-912 (2007).
2. Chen, J.K., Taipale, J., Young, K.E., *et al.* Small molecule modulation of smoothened activity. *Proc. Natl. Acad. Sci. USA* **99(22)**, 14071-14076 (2002).
3. Rominger, C.M., Bee, W.L.T., Copeland, R.A., *et al.* Evidence for allosteric interactions of antagonist binding to the smoothened receptor. *J. Pharmacol. Exp. Ther.* **329(3)**, 995-1005 (2009).
4. Stanton, B.Z. and Peng, L.F. Small-molecule modulators of the Sonic Hedgehog signaling pathway. *Mol. Biosyst.* **6(1)**, 44-54 (2010).
5. Scales, S.J. and de Sauvage, F.J. Mechanisms of hedgehog pathway activation in cancer and implications for therapy. *Trends Pharmacol. Sci.* **30(6)**, 303-312 (2009).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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