

# Certificate of Analysis

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**Product Name:** SANT-1

**Catalog No.:** 1974

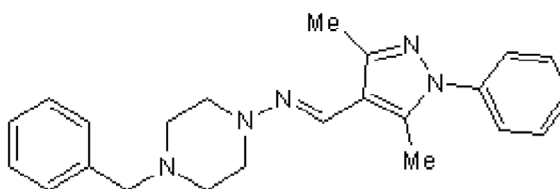
**Batch No.:** 2

**CAS Number:** 304909-07-7

**IUPAC Name:** *N*-[(3,5-dimethyl-1-phenyl-1*H*-pyrazol-4-yl)methylene]-4-(phenylmethyl)-1-piperazinamine

## 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** C<sub>23</sub>H<sub>27</sub>N<sub>5</sub>.  
**Batch Molecular Weight:** 373.5  
**Physical Appearance:** White solid  
**Solubility:** DMSO to 50 mM  
**Storage:** Store at +4°C  
**Batch Molecular Structure:**



## 2. ANALYTICAL DATA

**HPLC:** Shows 99.4% purity  
**<sup>1</sup>H NMR:** Consistent with structure  
**Mass Spectrum:** Consistent with structure  
**Microanalysis:**

	Carbon Hydrogen Nitrogen		
Theoretical	73.96	7.29	18.75
Found	73.7	7.14	18.73

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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**Description:**

SANT-1 is a potent, cell-permeable inhibitor of Sonic hedgehog (Shh) signaling; high affinity antagonist of smoothened activity ( $K_D = 1.2$  nM). Inhibits smoothened agonist effects with an  $IC_{50}$  of 20 nM (in Shh-LIGHT2 cells). Used in protocols to generate pancreatic  $\beta$  cells from hPSCs (see our protocol below). For more information about how SANT-1 may be used, see our protocol: Generation of  $\beta$  cells from hPSCs

**Physical and Chemical Properties:**

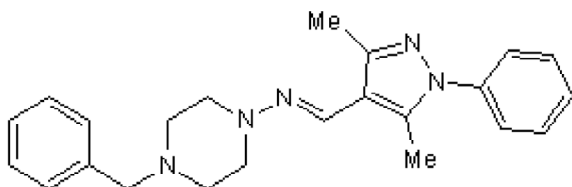
Batch Molecular Formula:  $C_{23}H_{27}N_5$ .

Batch Molecular Weight: 373.5

Physical Appearance: White solid

**Minimum Purity:**  $\geq 98\%$

**Batch Molecular Structure:**



**References:**

Chen *et al* (2002) Small molecule modulation of smoothened activity. *Proc.Natl.Acad.Sci.USA*. **99** 1407.

**Storage:** Store at +4°C

**Solubility & Usage Info:**

DMSO to 50 mM

**Stability and Solubility Advice:**

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. \*Unless contradicted by product-specific protocols or instructions, our standard recommendations apply:

**SOLIDS:** Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

**SOLUTIONS:** We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

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