

# PRODUCT INFORMATION



## HhAntag

Item No. 28296

CAS Registry No.: 496794-70-8

Formal Name: N-[4-chloro-3-[6-(dimethylamino)-1H-benzimidazol-2-yl]phenyl]-3,5-dimethoxybenzamide

MF:  $C_{24}H_{23}ClN_4O_3$

FW: 450.9

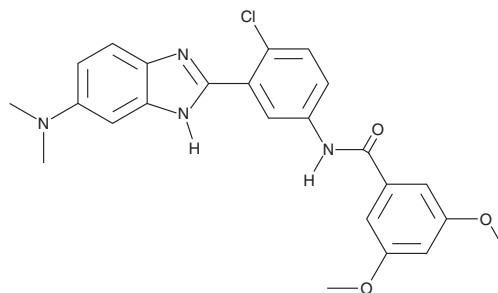
Purity:  $\geq 95\%$

UV/Vis.:  $\lambda_{max}$ : 213 nm

Supplied as: A crystalline solid

Storage:  $-20^{\circ}\text{C}$

Stability:  $\geq 4$  years



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

### Laboratory Procedures

HhAntag is supplied as a crystalline solid. A stock solution may be made by dissolving the HhAntag in the solvent of choice. HhAntag is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of HhAntag in ethanol and DMF is approximately 1 mg/ml and approximately 2 mg/ml in DMSO.

HhAntag is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, HhAntag should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. HhAntag has a solubility of approximately 0.3 mg/ml in a 1:2 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

HhAntag is an inhibitor of the Sonic Hedgehog (Shh) pathway ( $EC_{50} = 0.4 \mu\text{M}$  for Shh signaling in a reporter assay).<sup>1</sup> It inhibits proliferation of GNP cells when used at concentrations ranging from 0.1 nM to 25  $\mu\text{M}$ . *In vivo*, HhAntag (20 or 100 mg/kg) suppresses *Gli1* mRNA levels, a target of Shh signaling, and increases tumor cell death in a mouse model of *Ptc1*<sup>+/−</sup>*p53*<sup>−/−</sup> medulloblastoma. HhAntag also blocks basal and bone morphogenic protein 2-induced chondrogenesis in micromass cultures of mouse limb mesenchymal cells.<sup>2</sup>

### References

1. Romer, J.T., Kimura, H., Magdaleno, S., *et al.* Suppression of the Shh pathway using a small molecule inhibitor eliminates medulloblastoma in *Ptc1*<sup>+/−</sup>*p53*<sup>−/−</sup> mice. *Cancer Cell* **6**(3), 229-240 (2004).
2. Mundy, C., Bello, A., Sgariglia, F., *et al.* HhAntag, a hedgehog signaling antagonist, suppresses chondrogenesis and modulates canonical and non-canonical BMP signaling. *J. Cell Physiol.* **231**(5), 1033-1044 (2016).

#### 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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