

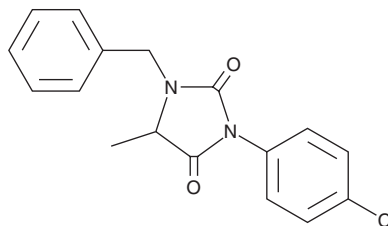
PRODUCT INFORMATION



ALLO-1

Item No. 17776

CAS Registry No.: 37468-32-9
Formal Name: 3-(4-chlorophenyl)-5-methyl-1-(phenylmethyl)-2,4-imidazolidinedione
MF: C₁₇H₁₅ClN₂O₂
FW: 314.8
Purity: ≥98%
UV/Vis.: λ_{max}: 220 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

ALLO-1 is supplied as a crystalline solid. A stock solution may be made by dissolving the ALLO-1 in the solvent of choice, which should be purged with an inert gas. ALLO-1 is soluble in organic solvents such as DMSO and dimethyl formamide (DMF). The solubility of ALLO-1 in these solvents is approximately 20 and 30 mg/ml, respectively.

ALLO-1 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, ALLO-1 should first be dissolved in DMF and then diluted with the aqueous buffer of choice. ALLO-1 has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Hedgehog (Hh) proteins, important regulators of development, bind the cell-surface protein Patched, allowing activation of the GPCR-like receptor, Smoothed (SMO).¹ In vertebrates, this ultimately leads to the activation of the zinc-finger transcription factors of the Gli family. Overactivation of this pathway contributes to certain cancers.² ALLO-1 is a SMO antagonist that inhibits both wild-type (IC₅₀ = 50 nM) and mutant SMO, including the D473H SMO mutant (IC_{50S} = 300-1000 nM).³ This compound binds to the SMO cysteine-rich domain, which is a different mechanism of interaction compared to other known SMO ligands that bind the transmembrane pocket.^{3,4}

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. Rubin, L.L. and de Sauvage, F.J. Targeting the Hedgehog pathway in cancer. *Nat. Rev. Drug Discov.* **5**(12), 1026-1033 (2006).
3. Tao, H., Jin, Q., Koo, D.-I., *et al.* Small molecule antagonists in distinct binding modes inhibit drug-resistant mutant of smoothed. *Chem. Biol.* **18**, 432-437 (2011).
4. Sharpe, H.J., Wang, W., Hannoush, R.N., *et al.* Regulation of the oncoprotein Smoothed by small molecules. *Nat. Chem. Biol.* **11**, 246-255 (2015).

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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