

PRODUCT INFORMATION

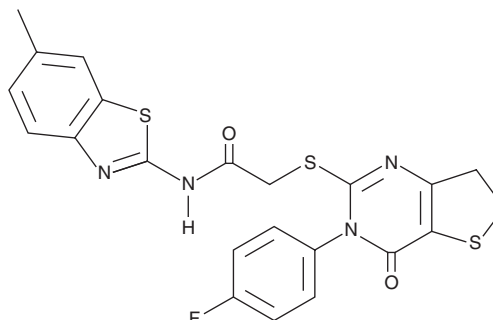


IWP-3

Item No. 13953

CAS Registry No.: 13953
Formal Name: 2-[[3-(4-fluorophenyl)-3,4,6,7-tetrahydro-4-oxothieno[3,2-d]pyrimidin-2-yl]thio]-N-(6-methyl-2-benzothiazolyl)-acetamide
Synonyms: Inhibitor of Wnt Production-3

MF: C₂₂H₁₇FN₄O₂S₃
FW: 484.6
Purity: ≥98%
UV/Vis.: λ_{max}: 279, 302, 345 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥2 years



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

Laboratory Procedures

IWP-3 is supplied as a crystalline solid. A stock solution may be made by dissolving the IWP-3 in the solvent of choice, which should be purged with an inert gas. IWP-3 is soluble in organic solvents such as DMSO and dimethyl formamide (DMF). The solubility of IWP-3 in these solvents is approximately 0.1 and 2 mg/ml, respectively.

IWP-3 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, IWP-3 should first be dissolved in DMF and then diluted with the aqueous buffer of choice. IWP-3 has a solubility of approximately 0.3 mg/ml in a 1:2 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

IWP-3 is an inhibitor of Wnt production that impairs Wnt pathway activity *in vitro* with an IC₅₀ value of 40 nM.¹ IWP-3 inactivates porcupine, a membrane-bound O-acyltransferase responsible for palmitoylating Wnt proteins, which is essential for their signaling ability and secretion.¹ At 5 μM, IWP-3 has been shown to block Wnt-dependent phosphorylation of the low-density lipoprotein receptor-related protein 6 (LRP6) and the scaffold protein Dishevelled, preventing the accumulation of β-catenin.¹ By inhibiting Wnt signaling, IWP-3 has been used to promote cardiomyocyte generation from human embryonic stem cells (EC₅₀ = 1.2 μM).²

References

1. Chen, B., Dodge, M.E., Tang, W., *et al.* Small molecule-mediated disruption of Wnt-dependent signaling in tissue regeneration and cancer. *Nat. Chem. Biol.* **5**(2), 100-107 (2009).
2. Willems, E., Spiering, S., Davidovics, H., *et al.* Small molecule inhibitors of the Wnt pathway potently promote cardiomyocytes from human embryonic stem cell derived mesoderm. *Circ. Res.* **109**(4), 360-364 (2011).

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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