

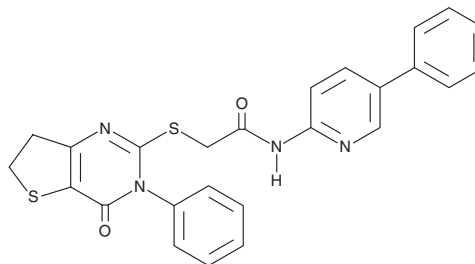
# PRODUCT INFORMATION



## IWP-L6

Item No. 15243

**CAS Registry No.:** 1427782-89-5  
**Formal Name:** N-(5-phenyl-2-pyridinyl)-2-[(3,4,6,7-tetrahydro-4-oxo-3-phenylthieno[3,2-d]pyrimidin-2-yl)thio]-acetamide  
**Synonyms:** PORCN Inhibitor III, Wnt Pathway Inhibitor XIX  
**MF:** C<sub>25</sub>H<sub>20</sub>N<sub>4</sub>O<sub>2</sub>S<sub>2</sub>  
**FW:** 472.6  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 269, 340 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

IWP-L6 is supplied as a crystalline solid. A stock solution may be made by dissolving the IWP-L6 in the solvent of choice, which should be purged with an inert gas. IWP-L6 is soluble in organic solvents such as DMSO and dimethyl formamide (DMF). The solubility of IWP-L6 in these solvents is approximately 2 and 5 mg/ml, respectively.

IWP-L6 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, IWP-L6 should first be dissolved in DMF and then diluted with the aqueous buffer of choice. IWP-L6 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

Porcupine (PORCN) is a membrane bound O-acyltransferase that mediates palmitoylation of Wnt family proteins.<sup>1</sup> This step is required for secretion and biologic activity of Wnt proteins, which have roles in embryonic development and cancer.<sup>1,2</sup> IWP-L6 is a potent inhibitor of PORCN (EC<sub>50</sub> = 0.5 nM).<sup>3</sup> It suppresses the phosphorylation of dishevelled 2 in HEK293 cells. IWP-L6 displays high stability in human plasma (t<sub>1/2</sub> > 24 hours) and in zebrafish, but it is much less stable in plasma from mice and rats.<sup>3</sup> In zebrafish, IWP-L6 blocks Wnt/β-catenin-dependent developmental processes, including tailfin regeneration and posterior axis formation.<sup>3</sup> It also completely prevents branching morphogenesis in cultured mouse embryonic kidneys at doses of 50 nM and above, indicating complete inhibition of Wnt signaling.<sup>3</sup>

### References

1. Gao, X. and Hannoush, R.N. Single-cell imaging of Wnt palmitoylation by the acyltransferase porcupine. *Nat. Chem. Biol.* **10**(10), 61-68 (2014).
2. Proffitt, K.D., Madan, B., Ke, Z., et al. Pharmacological inhibition of the Wnt acyltransferase PORCN prevents growth of WNT-driven mammary cancer. *Cancer Res.* **73**(2), 502-507 (2013).
3. Wang, X., Moon, J., Dodge, M.E., et al. The development of highly potent inhibitors for porcupine. *J. Med. Chem.* **56**(6), 2700-2704 (2013).

#### 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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