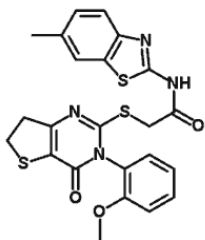


PRODUCT SPECIFICATIONS SHEET:

Stemolecule™ Wnt Inhibitor IWP-4

Product Name	Stemolecule™ Wnt Inhibitor IWP-4
Description	Wnt Inhibitor IWP-4 was identified in a high throughput screen for antagonists of the Wnt/ β -catenin pathway. Wnt Inhibitor IWP-4 prevents palmitoylation of Wnt proteins by Porcupine (Porcn), a membrane-bound O-acyltransferase, thereby blocking Wnt secretion and activity. It also blocks phosphorylation of the Lrp6 receptor and accumulation of both Dvl2 and β -catenin ¹ .
Catalog Number	AMS.04-0036
Size	2 mg
Alternate Names	2-(3,4,6,7-tetrahydro-3-(2-methoxyphenyl)-4-oxotheno[3,2- <i>d</i>]pyrimidin-2-ylthio)- <i>N</i> -(6-methylbenzo[<i>d</i>]thiazol-2-yl)acetamide
Chemical Formula	C ₂₃ H ₂₀ N ₄ O ₃ S ₃
Structure	 <p>The chemical structure of Wnt Inhibitor IWP-4 is a complex heterocyclic molecule. It features a central thiazolo[5,4-d]pyrimidin-2(1H)-one core. This core is substituted with a 2-methoxyphenyl group at the 3-position, a 6-methylbenzothiazol-2-ylthio group at the 2-position, and a 2-(3,4,6,7-tetrahydro-3-(2-methoxyphenyl)-4-oxotheno[3,2-d]pyrimidin-2-ylthio)acetamide group at the 4-position. The structure is drawn in a skeletal format with standard chemical notation.</p>
Molecular Weight	496.62
CAS Number	686772-17-8
Purity	>96% pure by HPLC
Formulation	White solid
Solubility	For a 2.5 mM concentrated stock solution of Wnt Inhibitor IWP-4, reconstitute the compound by adding 1.61 mL of DMSO to the entire contents of the vial. If

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precipitate is observed, warm the solution to 37 °C for 2 to 5 minutes. For use in cell culture, warm the medium just prior to adding the reconstituted compound. Once the compound is added, mix and filter-sterilize the medium using a 0.2 µm low-protein binding filter.

Storage and Stability

Store powder at 4 °C or -20 °C, protected from light.

Information about the stability of Stemolecules in solution is largely not available. As a general guideline, we recommend that stock solution be freshly made and stored in aliquots at -20 °C. The effect of storage of stock solutions should be verified for each application.

Quality Control

The purity of Wnt Inhibitor IWP-4 was determined by HPLC analysis. The accurate mass was determined by mass spectrometry. The structure was verified by NMR spectroscopy. Cellular toxicity was tested on pluripotent stem cells.

Regulatory Disclaimer

For research use only. Not for use in therapeutic or diagnostic procedures.

References

1. Chen B; Dodge ME; Tang W; Lu J; Ma Z; Fan CW; Wei S; Hao W; Kilgore J; Williams NS; Roth MG; Amatruda JF; Chen C; Lum L.(2009) Small molecule-mediated disruption of Wnt-dependent signaling in tissue regeneration and cancer. *Nat Chem Biol* 5: 100-107.

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