

Product Name: IWP 4

Catalog No.: 5214

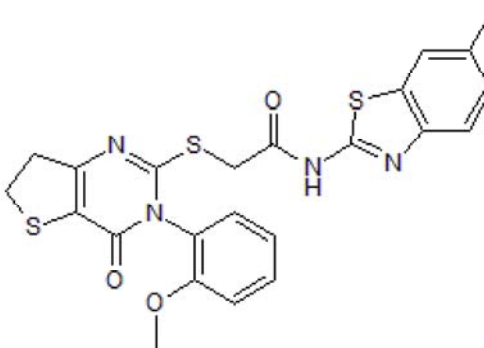
Batch No.: 2

CAS Number: 686772-17-8

IUPAC Name: *N*-(6-Methyl-2-benzothiazolyl)-2-[(3,4,6,7-tetrahydro-3-(2-methoxyphenyl)-4-oxothieno[3,2-d]pyrimidin-2-yl)thio]-acetamide

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₂₃H₂₀N₄O₃S₃
Batch Molecular Weight: 496.62
Physical Appearance: Beige solid
Solubility: DMSO to 1 mM
Storage: Store at +4°C
Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 99.0% purity
¹H NMR: Consistent with structure
Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	55.62	4.06	11.28
Found	55.67	4.06	11.18

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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Description:

Potent inhibitor of Wnt/ β -catenin signaling (IC_{50} = 25 nM). Has minimal effect on Notch and Hedgehog signaling pathways. Induces differentiation of cardiomyocytes from human ESCs and iPSCs.

Physical and Chemical Properties:

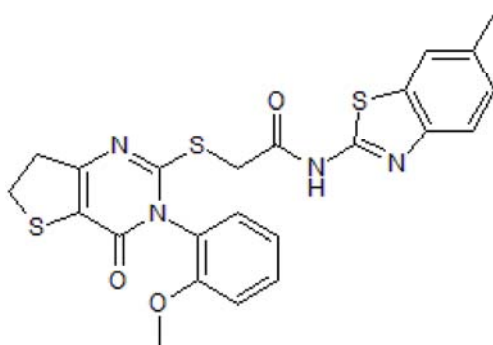
Batch Molecular Formula: $C_{23}H_{20}N_4O_3S_3$

Batch Molecular Weight: 496.62

Physical Appearance: Beige solid

Minimum Purity: $\geq 98\%$

Batch Molecular Structure:



Storage: Store at +4°C

Solubility & Usage Info:

DMSO to 1 mM

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

References:

Noor et al (2019) 3D Printing of Personalized Thick and Perfusible Cardiac Patches and Hearts. *Adv Sci (Weinh)* **6** 1900344. PMID: 31179230.

Hoang et al (2018) Generation of spatial-patterned early-developing cardiac organoids using human pluripotent stem cells. *Nat Protoc.* **13** 723. PMID: 29543795 .

Narytnyk et al (2014) Differentiation of human epidermal neural crest stem cells (hEPI-NCSC) into virtually homogenous populations of DArgic neurons. *Stem Cell Rev.* **10** 316. PMID: 24399192.

Lian et al (2012) Robust cardiomyocyte differentiation from human pluripotent stem cells via temporal modulation of canonical Wnt signaling. *Proc.Natl.Acad.Sci.U.S.A.* **109** E1848-57. PMID: 22645348.

Chen et al (2009) Small molecule-mediated disruption of Wnt-dependent signaling in tissue regeneration and cancer. *Nat.Chem.Biol.* **5** 100. PMID: 19125156.

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