bio-techne
TOCRIS

Print Date: Apr 28th 2023

Certificate of Analysis

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Product Name: **IWP 4** **Catalog No.: 5214** **Batch No.: 4**

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: $C_{23}H_{20}N_4O_3S_3.¼H_2O$

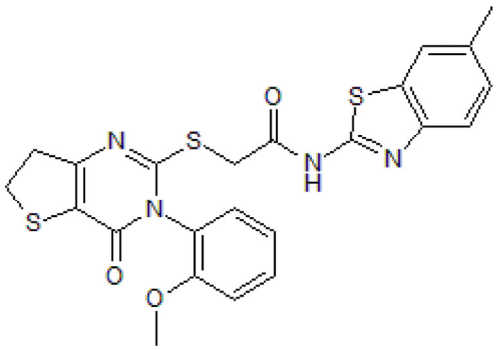
Batch Molecular Weight: 501.12

Physical Appearance: Cream solid

Solubility: DMSO to 1 mM

Storage: Store at +4°C

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 98.9% purity

^{1}H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	55.13	4.12	11.18
Found	54.75	4.02	10.92

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

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Description:

IWP 4 is a 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: $C_{23}H_{20}N_4O_3S_3.¼H_2O$

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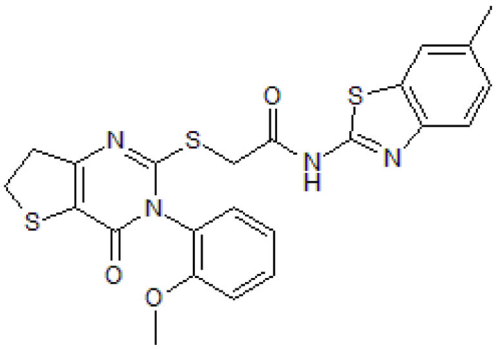
Physical Appearance: Cream solid

Minimum Purity: ≥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 Perfusable 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.