TOCRIS
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Print Date: Feb 14th 2019

Certificate of Analysis

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Product Name: **AS 1949490** **Catalog No.: 3718** **Batch No.: 1**

CAS Number: 1203680-76-5

IUPAC Name: 3-[(4-Chlorophenyl)methoxy]-*N*-[(1*S*)-1-phenylethyl]thiophene-2-carboxamide

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{20}H_{18}ClNO_2S$

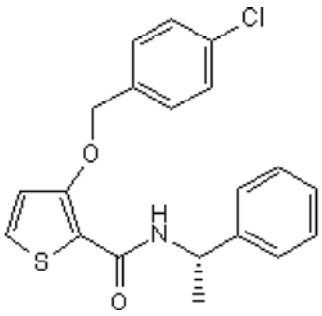
Batch Molecular Weight: 371.88

Physical Appearance: White solid

Solubility: DMSO to 100 mM
ethanol to 100 mM

Storage: Store at RT

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 100% purity

Chiral HPLC: Shows 100% purity

^{1}H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	64.59	4.88	3.77
Found	64.42	4.82	3.74

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Description:

Selective SHIP2 (SH2 domain-containing inositol 5'-phosphatase 2) inhibitor (IC_{50} values are 0.34 µM and 0.62 µM for mouse and human respectively); displays approximately 30-fold affinity for SHIP2 over SHIP1. Increases insulin-induced phosphorylation of Akt in L6 myotubules. Stimulates activation of glucose metabolism; regulates gluconeogenesis in vitro and in vivo and exhibits antidiabetic effects. Also promotes increased BDNF mRNA levels in cultured cortical neurons and has memory enhancing and antidepressant effects in vivo.

Physical and Chemical Properties:

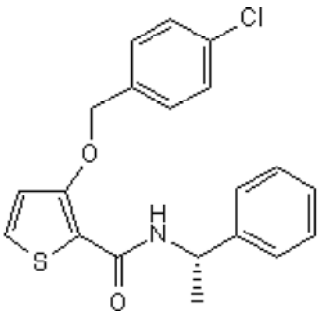
Batch Molecular Formula: $C_{20}H_{18}ClNO_2S$

Batch Molecular Weight: 371.88

Physical Appearance: White solid

Minimum Purity: >99%

Batch Molecular Structure:



Storage: Store at RT

Solubility & Usage Info:

DMSO to 100 mM
ethanol to 100 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:

Tsuneki *et al* (2019) AS1949490, an inhibitor of 5'-lipid phosphatase SHIP2, promotes protein kinase C-dependent stabilization of brain-derived neurotrophic factor mRNA in cultured cortical neurons. Eur.J.Pharmacol.. PMID: 30753865.

Suwa *et al* (2010) Glucose metabolism activation by SHIP2 inhibitors via up-regulation of GLUT1 gene in L6 myotubes. Eur.J.Pharmacol. ***642*** 177. PMID: 20558154.

Suwa *et al* (2009) Discovery and functional characterization of a novel small molecule inhibitor of the intracellular phosphatase, SHIP2. Br.J.Pharmcol. ***158*** 879.