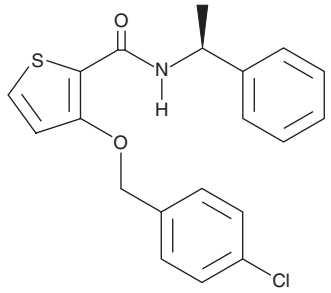
PRODUCT INFORMATION

AS-1949490

Item No. 17627

CAS Registry No.:	1203680-76-5
Formal Name:	3-[(4-chlorophenyl)methoxy]-N-[(1S)-1-phenylethyl]-2-thiophenecarboxamide
MF:	$C_{20}H_{18}ClNO_2S$
FW:	371.9
Purity:	≥98%
UV/Vis.:	λ_{max}: 265 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

AS-1949490 is supplied as a crystalline solid. A stock solution may be made by dissolving the AS-1949490 in the solvent of choice, which should be purged with an inert gas. AS-1949490 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of AS-1949490 in these solvents is approximately 20, 50, and 30 mg/ml, respectively.

AS-1949490 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, AS-1949490 should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. AS-1949490 has a solubility of approximately 0.3 mg/ml in a 1:2 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

SH2 domain-containing inositol 5'-phosphatase 2 (SHIP2) negatively regulates the insulin signaling pathway by hydrolyzing phosphatidylinositol-3,4,5-trisphosphate.[1] Its activity has been implicated in the pathogenesis of insulin resistance and type 2 diabetes.[2] AS-1949490 is a small molecule inhibitor of SHIP2 (IC_{50}s = 0.62 and 0.34 µM for human and mouse, respectively; K_i = 0.44 µM for hSHIP2).[3] It is not as potent an inhibitor of SHIP1, demonstrating inhibitory values 30-fold higher than that of SHIP2, and shows little effect against the phosphatases PTEN, synaptojanin, and myotubularin (IC_{50}s >50 µM).[3] AS-1949490 has been shown to dose-dependently increase insulin-induced phosphorylation of Akt and to activate glucose metabolism.[3] It has also been shown to suppress gluconeogenesis through reduced expression of PEPCK and G6Pase mRNA in normal mice and to decrease plasma glucose in diabetic *db/db* mice.[3]

References

1. Batty, I.H., Van der Kaay, J., Gray, A., *et al*. The control of phosphatidylinositol 3,4-bisphosphate concentrations by activation of the Src homology 2 domain containing inositol polyphosphate 5-phosphatase 2, SHIP2. *Biochem. J.* **407**, 255-266 (2007).
2. Sleeman, M.W., Wortley, K.E., Lai, K.-M.V., *et al*. Absence of the lipid phosphatase SHIP2 confers resistance to dietary obesity. *Nat. Med.* **11(2)**, 199-205 (2005).
3. Suwa, A., Yamamoto, T., Sawada, A., *et al*. Discovery and functional characterization of a novel small molecule inhibitor of the intracellular phosphatase, SHIP2. *Br. J. Pharmacol.* **158**, 879-887 (2009).

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.

WARRANTY AND LIMITATION OF REMEDY
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