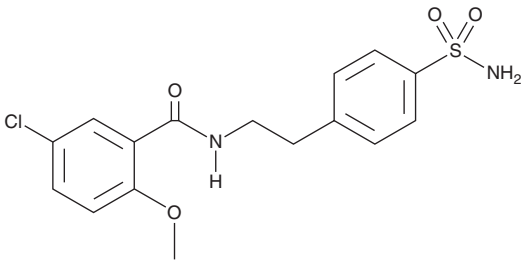
PRODUCT INFORMATION

NLRP3i

Item No. 30895

CAS Registry No.:	16673-34-0
Formal Name:	N-[2-[4-(aminosulfonyl)phenyl]ethyl]-5-chloro-2-methoxy-benzamide
MF:	$C_{16}H_{17}ClN_2O_4S$
FW:	368.8
Purity:	≥95%
UV/Vis.:	λ_{max}: 227 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

NLRP3i is supplied as a crystalline solid. A stock solution may be made by dissolving the NLRP3i in the solvent of choice, which should be purged with an inert gas. NLRP3i is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of NLRP3i in these solvents is approximately 30 mg/ml.

NLRP3i is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, NLRP3i should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. NLRP3i has a solubility of approximately 0.14 mg/ml in a 1:7 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

NLRP3i is an intermediate in the synthesis of glyburide (Item No. 15009) and an inhibitor of the NOD-, LRR-, and pyrin domain-containing protein 3 (NLRP3) inflammasome.[1] It is selective for NLRP3 over NLRP4 and absent in melanoma 2 (AIM2) inflammasomes at 400 µM. NLRPi inhibits LPS-induced IL-1β release and apoptosis-associated speck-like protein containing a CARD (ASC) oligomerization in J774A.1 mouse macrophages. *In vivo*, NLRP3i (100 mg/kg) reduces infarct size and cardiac levels of troponin I in a mouse model of acute myocardial infarction. It reduces peritoneal leukocyte infiltration in a mouse model of peritonitis induced by zymosan A (Item No. 21175) in a dose-dependent manner. NLRP3i (100 mg/kg) also decreases plasma IL-18 levels and reduces systolic and diastolic dysfunction in a mouse model of Western diet-induced obesity.[2]

References

1. Marchetti, C., Chojnacki, J., Toldo, S., *et al.* A novel pharmacologic inhibitor of the NLRP3 inflammasome limits myocardial injury following ischemia-reperfusion in the mouse. *J. Cardiovasc. Pharmacol.* **63(4)**, 316-322 (2015).
2. Carbone, S., Mauro, A.G., Prestamburgo, A., *et al.* An orally available NLRP3 inflammasome inhibitor prevents western diet-induced cardiac dysfunction in mice. *J. Cardiovasc. Pharmacol.* **72(6)**, 303-307 (2018).

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.

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