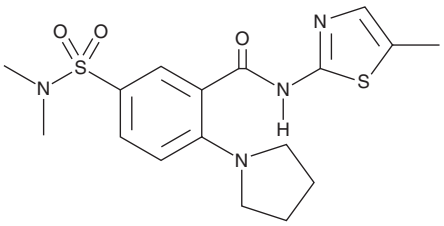
PRODUCT INFORMATION

NGI 1

Item No. 31519

CAS Registry No.:	790702-57-7
Formal Name:	5-[(dimethylamino)sulfonyl]-N-(5-methyl-2-thiazolyl)-2-(1-pyrrolidinyl)-benzamide
Synonym:	N-linked Glycosylation Inhibitor 1
MF:	$C_{17}H_{22}N_4O_3S_2$
FW:	394.5
Purity:	≥98%
UV/Vis.:	λ_{max}: 287 nm
Supplied as:	A 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

NGI 1 is supplied as a solid. A stock solution may be made by dissolving the NGI 1 in the solvent of choice, which should be purged with an inert gas. NGI 1 is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of NGI 1 in these solvents is approximately 10 mg/ml.

NGI 1 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, NGI 1 should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. NGI 1 has a solubility of approximately 0.25 mg/ml in a 1:3 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

NGI 1 is an oligosaccharyltransferase (OST) inhibitor.[1] It binds to and stabilizes the STT3B catalytic subunit of OST in a cellular thermal shift assay (CETSA) and inhibits N-linked glycosylation in a reporter assay using D54 ER-LucT cells (IC_{50} = 1.1 µM). NGI 1 (10 µM) reduces glycosylation and membrane localization of EGFR in H3255 lung adenocarcinoma cells and inhibits proliferation of PC-9 and A549 non-small cell lung cancer (NSCLC) cells. It inhibits dengue and Zika virus replication in HEK293 cells (EC_{50}s = 0.85 and 2.2 µM, respectively).[2] NGI 1 also reduces viral RNA in HEK293 cells infected with West Nile virus or yellow fever virus.

References

1. Lopez-Sambrooks, C., Shrimal, S., Khodier, C., *et al.* Oligosaccharyltransferase inhibition induces senescence in RTK-driven tumor cells. *Nat. Chem. Biol.* **12(12)**, 1023-1030 (2016).
2. Puschnik, A.S., Marceau, C.D., Ooi, Y.S., *et al.* A small-molecule oligosaccharyltransferase inhibitor with pan-flaviviral activity. *Cell Rep.* **21(11)**, 3032-3039 (2017).

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