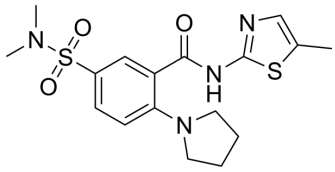
NGI-1

Cat. No.:	HY-117383
CAS No.:	790702-57-7
Molecular Formula:	$C_{17}H_{22}N_4O_3S_2$
Molecular Weight:	394.51
Target:	Virus Protease
Pathway:	Anti-infection
Storage:	Powder -20°C 3 years 4°C 2 years In solvent -80°C 2 years -20°C 1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (253.48 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.5348 mL	12.6740 mL	25.3479 mL
	5 mM	0.5070 mL	2.5348 mL	5.0696 mL
	10 mM	0.2535 mL	1.2674 mL	2.5348 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.5 mg/mL (6.34 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (6.34 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

NGI-1 (ML414) is a potent oligosaccharyltransferase (OST) inhibitor, directly targeting and blocking the function of the OST catalytic subunits STT3A and STT3B[1]. NGI-1 is a cell permeable inhibitor and can effectively reduce virus infectivity without affecting cell viability[2].

IC_{50} & Target

OST[1]

In Vitro

NGI-1 inhibits the glycosylation of LASV GP mediated by STT3A-OST (in STT3B- and MAGT1-TUSC3- cells) or STT3B-OST (in STT3A- cells) and impaires its proteolytic cleavage in a dose-dependent manner[1].
?NGI-1 blocks EGFR N-linked glycosylation in lung adenocarcinoma cells as assessed. In controls EGFR is biotinylated, consistent with its plasma membrane expression, but in NGI-1 treated cells the EGFR is predominantly found in the non-

biotinylated intracellular fraction suggesting a change in cellular localization[2].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Western Blot Analysis[1]

Cell Line:	STT3A-, STT3B- and MAGT1-TUSC3- cells
Concentration:	1, 2, 5 μM
Incubation Time:	36 hours
Result:	Inhibited the glycosylation of LASV GP mediated by STT3A-OST (in STT3B- and MAGT1-TUSC3- cells) or STT3B-OST (in STT3A- cells) and impaired its proteolytic cleavage in a dose-dependent manner.

CUSTOMER VALIDATION

- Cancer Discov. 2020 Dec;10(12):1872-1893.
- J Virol. 2019 Nov 13;93(23):e01443-19.
- Front Mol Biosci. 2022 Apr 27;9:899192.
- J Biol Chem. 2023 Sep 1;105211.
- Biochem Bioph Res Co. 2020 Nov 26;533(1):77-82.

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REFERENCES

[1]. Zhu S, et al. Comprehensive Interactome Analysis Reveals that STT3B is Required for the N-Glycosylation of Lassa Virus Glycoprotein. J Virol. 2019 Sep 11. pii: JVI.01443-19.

[2]. Lopez-Sambrooks C, et al. Oligosaccharyltransferase inhibition induces senescence in RTK-driven tumor cells. Nat Chem Biol. 2016 Dec;12(12):1023-1030.

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