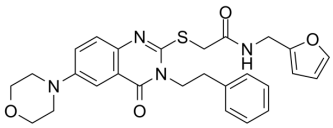
STAMBP-IN-1

Cat. No.:	HY-141852
CAS No.:	896683-78-6
Molecular Formula:	$C_{27}H_{28}N_4O_4S$
Molecular Weight:	504.6
Target:	Deubiquitinase
Pathway:	Cell Cycle/DNA Damage
Storage:	4°C, sealed storage, away from moisture and light * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture and light)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 3.29 mg/mL (6.52 mM; warming and heat to 80°C)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	1.9818 mL	9.9088 mL	19.8177 mL
	5 mM	0.3964 mL	1.9818 mL	3.9635 mL
	10 mM	---	---	---

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

BIOLOGICAL ACTIVITY

Description

STAMBP-IN-1 is a small-molecule inhibitor of STAMBP deubiquitinase, and interrupts STAMBP-Ub-NALP7 interaction. STAMBP-IN-1 decreases protein level of its inflammasome substrate NALP7 and suppresses IL-1b release after Toll-like receptor (TLR) agonism. STAMBP-IN-1 inhibits the activity of STAMBP to cleave recombinant di-Ub with an IC_{50} value of 0.33 mM[1].

In Vitro

STAMBP-IN-1 (0.1-10 μM; 6 h) exhibits the most potent ability to selectively decrease NALP7 abundance as well as endogenous NALP7 abundance in THP-1 cells, but not NALP6[1].

STAMBP-IN-1 (0.01-100 μM; 37 ℃; 2 h) inhibits cleavage of K63-linked di-Ub (200 nM) to mono-Ub by purified recombinant STAMBP (25 nM) in a concentration dependent manner[1].

STAMBP-IN-1 (0.01-10 μM; 37 ℃; 60 min) blocks STAMBP mediated deubiquitination of Ub-NALP7 in vitro in a concentration-dependent manner[1].

STAMBP-IN-1 exhibits toxicity against THP-1 cells with an IC_{50} of 106 μg/mL[1].

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

Western Blot Analysis[1]

Cell Line:	THP-1 cells
Concentration:	0.01, 0.1, 1, 10, and 100 μM
Incubation Time:	6 hours
Result:	Inhibited the activity of STAMBP to cleave recombinant di-Ub in a concentrationdependent manner with an IC_{50} of 0.33 mM (0.09-1.21 mM).

REFERENCES

[1]. Bednash JS,et al. Targeting the deubiquitinase STAMBP inhibits NALP7 inflammasome activity. Nat Commun. 2017 May 11;8:15203.

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