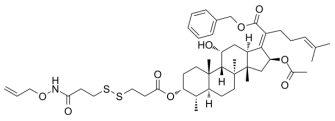
STING-IN-5

Cat. No.:	HY-152034
CAS No.:	2920064-17-9
Molecular Formula:	$C_{47}H_{67}NO_9S_2$
Molecular Weight:	854.17
Target:	STING
Pathway:	Immunology/Inflammation
Storage:	-20°C, stored under nitrogen * In solvent : -80°C, 6 months; -20°C, 1 month (stored under nitrogen)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (117.07 mM; Need ultrasonic)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	1.1707 mL	5.8536 mL	11.7073 mL
	5 mM	0.2341 mL	1.1707 mL	2.3415 mL
	10 mM	0.1171 mL	0.5854 mL	1.1707 mL

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

BIOLOGICAL ACTIVITY

Description

STING-IN-5 is a potent STING inhibitor, inhibiting LPS-induced NO synthesis in macrophages with an IC_{50} value of 1.15 μM. STING-IN-5 inhibits the inflammatory response. STING-IN-5 can be used to research anti-inflammatory diseases and sepsis[1] .

In Vitro

STING-IN-5 (compound 30) (40 μM; 24 h) exhibits less effect on RAW264.7 cell viability[1].
STING-IN-5 (2.5 and 5 μM; 2 h) inhibits NO production in LPS-stimulated RAW264.7 with inhibition rate of 69.28 ± 2.36 and 78.66 ± 2.73 at 2.5 and 5 μM, respectively, and exhibits IC_{50} of 1.15 ± 0.15 μM[1].
STING-IN-5 (0.5-2 μM; 2 h) suppresses STING, as well as TBK1/IRF3/NF-κB activation[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Viability Assay[1]

Cell Line:	RAW264.7
Concentration:	40 μM
Incubation Time:	24 h

Result:	Exhibited less effect on RAW264.7 cell viability of 91.08 ± 1.09%

Western Blot Analysis[1]

Cell Line:	RAW264.7 (stimulated by LPS for 6 h)
Concentration:	0.5, 1 and 2 μM
Incubation Time:	2 h
Result:	Significantly inhibited the protein expression of STING and the phosphorylation of the downstream targets TBK1, IRF3, p65, and IκB in a concentration-dependent manner.

In Vivo

STING-IN-5 (1.25-5 mg/kg; i.g.; once daily; for 3 days) have an obvious protective effect on acute liver injury in septic mice[1].
Pharmacokinetic Parameters of STING-IN-5 in male Sprague-Dawley rats[1].

T_{max} (h)	C_{max} (ng/mL)	AUC_{0-t} (ng/mL·h)	$AUC_{0-\infty}$ (ng/mL·h)	$T_{1/2}$ (h)	MRT_{0-t} (h)	$MRT_{0-\infty}$ (h)
1	66.52	81.08	135.7	1.11	0.99	2.02

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

Animal Model:	Male BALB/c mice (6-8 weeks; acute liver injury induced by injection of 10 mg/kg LPS)[1]
Dosage:	1.25, 2.5, 5 mg/kg
Administration:	i.g.; once daily; for 3 days
Result:	Significantly improved pathological changes including disorderly arranged liver cells, blurred boundaries, congested hepatic sinusoids, swollen hepatocytes, a small number of hepatocytes were necrotic, and inflammatory cells infiltrated local areas. Significantly reduced the levels of AST, ALT, and ALP (liver function specific indicators).

REFERENCES

[1]. Long J, et al. Discovery of fusidic acid derivatives as novel STING inhibitors for treatment of sepsis. Eur J Med Chem. 2022 Dec 15;244:114814.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com
Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA