MSA-2 dimer

Cat. No.: HY-141514

CAS No.: 2377881-92-8

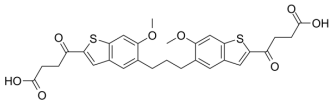
Molecular Formula: $C_{29}H_{28}O_8S_2$

Molecular Weight: 568.66

Target: STING

Pathway: Immunology/Inflammation

Storage: 4°C, sealed storage, away from moisture
* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 70 mg/mL (123.10 mM; Need ultrasonic)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	1.7585 mL	8.7926 mL	17.5852 mL
	5 mM	0.3517 mL	1.7585 mL	3.5170 mL
	10 mM	0.1759 mL	0.8793 mL	1.7585 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: ≥ 1.75 mg/mL (3.08 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: 1.75 mg/mL (3.08 mM); Suspended solution; Need ultrasonic
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 1.75 mg/mL (3.08 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

MSA-2 dimer is a selective, orally active non-nucleotide STING agonist (K_d=145 μM) with long-term antitumor and immunogenic activity. MSA-2 dimer is bound to STING as a non-covalent dimer exhibiting higher permeability than cyclic dinucleotide[1].

IC_{50} & Target

Kd: 145 μM (STING)[1]

In Vivo

MSA-2 dimer (60 mg/kg; p.o.; 50 days) inhibits tumor growth and prolongs overall survival[1].
MSA-2 dimer (40 mg/kg; s.c.; 25 days) induces complete tumor regression[1].
MSA-2 dimer (60 mg/kg; p.o.; 4 hours) increases proinflammatory cytokine (IFN-β) level in tumors[1].

MSA-2 dimer (60 mg/kg; s.c.; 4 hours) concentrations is observed in tumors than in plasma or other nontumor tissues [1].
MSA-2 dimer (THP-1 cells) induces phosphorylation of both TBK1 and IR. MSA-2 dimer (10 μM and 33 μM; macrophages) induces IFN-β[1].
MSA-2 dimer also exhibits dose-dependent antitumor activity when administered by IT, SC, or PO routes[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	B16F10 tumor-bearing mice
Dosage:	60 mg/kg
Administration:	P.o.; 50 days
Result:	Inhibited tumor growth and prolonged overall survival.

Animal Model:	C57BL6 mice
Dosage:	40 mg/kg
Administration:	S.c.; 25 days
Result:	Induced complete tumor regression.

Animal Model:	C57BL6 mice
Dosage:	60 mg/kg
Administration:	P.o.; 4 hours
Result:	Increased proinflammatory cytokine (IFN-β) level in tumors.

Animal Model:	C57BL6 mice
Dosage:	50 mg/kg
Administration:	S.c.; 4 hours
Result:	MSA-2 concentrations were observed in tumors than in plasma or other nontumor tissues.

REFERENCES

[1]. Pan BS, et al. An orally available non-nucleotide STING agonist with antitumor activity. Science. 2020;369(6506):eaba6098.

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