diABZI STING agonist-1

Cat. No.: HY-112921A

CAS No.: 2138299-33-7

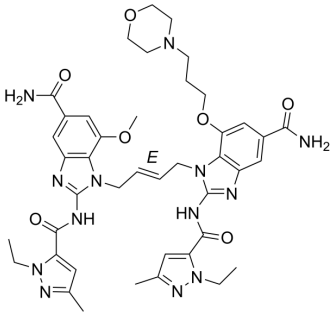
Molecular Formula: $C_{42}H_{51}N_{13}O_7$

Molecular Weight: 849.94

Target: STING

Pathway: Immunology/Inflammation

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 : 100 mg/mL (117.66 mM; Need ultrasonic)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	1.1766 mL	5.8828 mL	11.7655 mL
	5 mM	0.2353 mL	1.1766 mL	2.3531 mL
	10 mM	0.1177 mL	0.5883 mL	1.1766 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: ≥ 3.5 mg/mL (4.12 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 3.5 mg/mL (4.12 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

diABZI STING agonist-1 is a selective stimulator of interferon genes (STING) receptor agonist, with EC_{50}s of 130, 186 nM for human and mouse, respectively.

IC_{50} & Target

STING[1].

In Vitro

diABZI STING agonist-1 is a selective stimulator of interferon genes (STING) receptor agonist, with EC_{50}s of 130, 186 nM for human and mouse, respectively. At a concentration of 1 μM, diABZI STING agonist-1 (compound 3) demonstrates high selectivity against more than 350 kinases tested[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

diABZI STING agonist-1 (subcutaneous injection; 2.5 mg/kg) induces STING-dependent activation of type-I interferon and

pro-inflammatory cytokines in vivo[1].
?diABZI STING agonist-1 (intravenous injection; 3 mg/kg) exhibits systemic exposure with a half-life of 1.4 h and achieves systemic concentrations greater than the half-maximal effective concentration (EC_{50}) for mouse STING (200 ng/ml)[1].
?diABZI STING agonist-1 (intravenous injection; 1.5 mg/kg; days 1, 4 and 8; 43 days) results in significant tumour growth inhibition and significantly improves survival (P?[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Wild and $Sting^{-/-}$ C57Blk6 mice[1]
Dosage:	2.5 mg/kg
Administration:	Subcutaneous injection; 2.5 mg/kg
Result:	Activated secretion of IFNβ, IL-6, TNF, and CXCL1 in wild-type but not $Sting^{-/-}$ mice.

Animal Model:	Syngeneic mouse model of colorectal tumours (CT-26) in BALB/c mice[1]
Dosage:	3 mg/kg
Administration:	Intravenous injection; 3 mg/kg
Result:	Exhibited a half-life of 1.4 hours and achieved systemic concentrations greater than EC_{50} for mouse STING (200 ng/ml).

Animal Model:	Syngeneic mouse model of colorectal tumours (CT-26) in BALB/c mice[1]
Dosage:	1.5 mg/kg
Administration:	Intravenous injection; 1.5 mg/kg; 43 days
Result:	Resulted in significant tumour growth inhibition and improved survival.

CUSTOMER VALIDATION

- Nat Nanotechnol. 2021 Sep 30.
- Protein Cell. 2021 Oct 22;1-21.
- Mol Cell. 2023 Apr 14;S1097-2765(23)00243-5.
- Cell Death Differ. 2023 Nov 25.
- Proc Natl Acad Sci U S A. 2023 Jan 31;120(5):e2213777120.

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REFERENCES

[1]. Ramanjulu JM, et al. Design of amidobenzimidazole STING receptor agonists with systemic activity. Nature. 2018 Nov 7.

Caution: Product has not been fully validated for medical applications. For research use only.

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