STING agonist-1

Cat. No.: HY-19711

CAS No.: 702662-50-8

Molecular Formula: $C_{21}H_{16}ClFN_2O_3S$

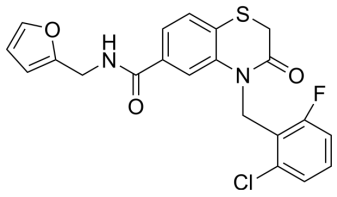
Molecular Weight: 430.88

Target: STING; Virus Protease

Pathway: Immunology/Inflammation; 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 : 75 mg/mL (174.06 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	2.3208 mL	11.6042 mL	23.2083 mL
5 mM	0.4642 mL	2.3208 mL	4.6417 mL
10 mM	0.2321 mL	1.1604 mL	2.3208 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 (5.80 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (5.80 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

STING agonist-1 (G10) is human-specific STING agonist that elicits antiviral activity against emerging Alphaviruses. G10 potently blocks replication of Alphavirus species Venezuelan Equine Encephalitis Virus (VEEV) with IC_{90} of 24.57 μM[1].

IC_{50} & Target

IC90: 24.57 μM (VEEV)[1]

In Vitro

G10 induces IFN/IRF3- but not NF-κB-dependent transcription in human fibroblasts[1].
G10 is an indirect activator of human STING-dependent phenotypes[1].
G10-mediated IRF3 activation and anti-Alphaviral activity occur independently of IPS-1/MAVS-dependent signaling[1].
STING is required for G10-mediated IRF3 activation, gene expression, and anti-Alphaviral activity[1].
G10 induces STING-dependent synthesis and secretion of bioactive interferon[1].

G10 induces innate antiviral mRNA expression in primary human cells[1].

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

CUSTOMER VALIDATION

- Cancer Immunol Res. 2023 May 3;11(5):583-599.
- Patent. US20200268864A1.

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REFERENCES

[1]. Sali TM, et al. Characterization of a Novel Human-Specific STING Agonist that Elicits Antiviral Activity Against Emerging Alphaviruses. PLoS Pathog. 2015 Dec 8;11(12):e1005324.

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