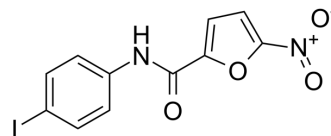


C-176

Cat. No.:	HY-112906		
CAS No.:	314054-00-7		
Molecular Formula:	C ₁₁ H ₇ IN ₂ O ₄		
Molecular Weight:	358.09		
Target:	STING		
Pathway:	Immunology/Inflammation		
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 : 62.5 mg/mL (174.54 mM; Need ultrasonic)
 Ethanol : 2.5 mg/mL (6.98 mM; ultrasonic and warming and heat to 60°C)

	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM	2.7926 mL	13.9630 mL	27.9259 mL
	5 mM	0.5585 mL	2.7926 mL	5.5852 mL
	10 mM	0.2793 mL	1.3963 mL	2.7926 mL

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

In Vivo

- Add each solvent one by one: Cremophor EL
Solubility: 10 mg/mL (27.93 mM); Clear solution; Need ultrasonic
- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
Solubility: 1.67 mg/mL (4.66 mM); Suspended solution; Need ultrasonic and warming
- Add each solvent one by one: 10% EtOH >> 40% PEG300 >> 5% Tween-80 >> 45% saline
Solubility: ≥ 0.25 mg/mL (0.70 mM); Clear solution
- Add each solvent one by one: 10% EtOH >> 90% (20% SBE-β-CD in saline)
Solubility: ≥ 0.25 mg/mL (0.70 mM); Clear solution
- Add each solvent one by one: 10% EtOH >> 90% corn oil
Solubility: 0.25 mg/mL (0.70 mM); Suspended solution; Need ultrasonic

BIOLOGICAL ACTIVITY

Description

C-176 is a selective and blood-brain barrier permeable STING inhibitor. C-176 covalently targets transmembrane cysteine residue 91 and thereby blocking activation-induced palmitoylation of STING^{[1][2]}.

IC₅₀ & Target	STING ^[1] .								
In Vitro	C-176 strongly reduces STING-mediated, but not RIG-I- or TBK1-mediated, IFN β reporter activity. Pretreatment with C-176 markedly reduce the CMA-mediated induction of serum levels of type I IFNs and IL-6 ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.								
In Vivo	C-176 (750/375 nmol C-176 per mouse in 200 μ L corn oil) significantly reduces the CMA-mediated induction of serum levels of type I IFNs and IL-6., without significant toxicity ^[1] . C-176 results in a significant reduction in serum levels of type I IFNs and in a strong suppression of inflammatory parameters in the heart, with no evident signs of overt toxicity Trex1 ^{-/-} mice ^[1] . C-176 demonstrates marked amelioration of various signs of systemic inflammation in Trex1 ^{-/-} mice ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.								
	<table border="1"> <tr> <td>Animal Model:</td> <td>WT type mice.</td> </tr> <tr> <td>Dosage:</td> <td>750/375 nmol C-176 per mouse in 200 μL corn oil (~1.34/0.67 mg/mL).</td> </tr> <tr> <td>Administration:</td> <td>Intraperitoneally, once.</td> </tr> <tr> <td>Result:</td> <td>Significantly reduced Serum levels of type I IFNs and IL-6.</td> </tr> </table>	Animal Model:	WT type mice.	Dosage:	750/375 nmol C-176 per mouse in 200 μ L corn oil (~1.34/0.67 mg/mL).	Administration:	Intraperitoneally, once.	Result:	Significantly reduced Serum levels of type I IFNs and IL-6.
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Administration:	Intraperitoneally, once.								
Result:	Significantly reduced Serum levels of type I IFNs and IL-6.								

CUSTOMER VALIDATION

- Bioact Mater. 2022 Dec 9;24:37-53.
- Nat Commun. 2023 May 23;14(1):2950.
- Nat Commun. 2023 May 26;14(1):3050.
- Neuron. 2022 Nov 4;S0896-6273(22)00961-8.
- J Clin Invest. 2021 Oct 15;131(20):e136329.

See more customer validations on www.MedChemExpress.com

REFERENCES

- [1]. Zhang LM, et al. STING mediates neuroinflammatory response by activating NLRP3-related pyroptosis in severe traumatic brain injury. J Neurochem. 2022 Sep;162(5):444-462.
- [2]. Haag SM, et al. Targeting STING with covalent small-molecule inhibitors. Nature. 2018 Jul;559(7713):269-273.

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

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