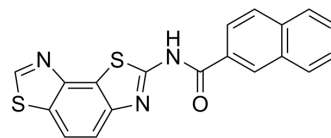


KIN1148

Cat. No.:	HY-101950		
CAS No.:	1428729-56-9		
Molecular Formula:	C ₁₉ H ₁₁ N ₃ OS ₂		
Molecular Weight:	361.44		
Target:	Influenza Virus		
Pathway:	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 : ≥ 100 mg/mL (276.67 mM)
 * "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent	Mass	1 mg	5 mg	10 mg
	Concentration				
	1 mM		2.7667 mL	13.8336 mL	27.6671 mL
	5 mM		0.5533 mL	2.7667 mL	5.5334 mL
	10 mM		0.2767 mL	1.3834 mL	2.7667 mL

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

BIOLOGICAL ACTIVITY

Description

KIN1148, a small-molecule IRF3 agonist, is a novel influenza vaccine adjuvant found to enhance flu vaccine efficacy.

In Vitro

KIN1148 induces the dose-dependent nuclear translocation of IRF3 in PH5CH8 cells and specific activation of IRF3-responsive promoters. KIN1148 also elicits greater induction of endogenous IRF3-dependent ISG54 and OASL expression by PH5CH8 cells^[1].

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

In Vivo

Prime-boost immunization of mice with a suboptimal dose of a monovalent pandemic influenza split virus H1N1 A/California/07/2009 vaccine plus KIN1148 protect against a lethal challenge with mouse-adapted influenza virus (A/California/04/2009) and induce an influenza virus-specific IL-10 and Th2 response by T cells derived from lung and lung-draining lymph nodes. Primeboost immunization with vaccine plus KIN1148, but not prime immunization alone, induce antibodies capable of inhibiting influenza virus hemagglutinin and neutralizing viral infectivity. Nevertheless, a single immunization with vaccine plus KIN1148 provide increased protection over vaccine alone and reduce viral load in the lungs after challenge^[1].

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

PROTOCOL

Animal Administration ^[1]

Mice: The final liposomes prior to mixing with vaccine contained KIN1148 (5 mg/mL) and phospholipids (40 mg/mL) and are delivered intramuscularly (KIN1148 at 50 µg and phospholipid at 400 µg per dose). Blank liposomes are prepared without KIN1148 as vehicle control. KIN1148 liposome and blank liposome formulations are stable for at least 4 months at 4°C and are used for in vivo experiments within a month after preparation^[1].

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

CUSTOMER VALIDATION

- Int Immunopharmacol. 2023 Mar 31;118:110104.
- PLoS Negl Trop Dis. 2023 Jan 10;17(1):e0011001.

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REFERENCES

[1]. Probst P, et al. A small-molecule IRF3 agonist functions as an influenza vaccine adjuvant by modulating the antiviral immune response. *Vaccine*. 2017 Apr 4;35(15):1964-1971.

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

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