

Product data sheet



MedKoo Cat#: 555218 Name: KIN-1148 CAS: 1428729-56-9 Chemical Formula: C ₁₉ H ₁₁ N ₃ OS ₂ Exact Mass: 361.0344 Molecular Weight: 361.437	
Product supplied as: Powder	
Purity (by HPLC): ≥ 98%	
Shipping conditions: Ambient temperature	
Storage conditions: Powder: -20°C 3 years; 4°C 2 years.	
In solvent: -80°C 3 months; -20°C 2 weeks.	

1. Product description:

KIN-1148 is a IRF3 agonist. IN1148 induced dose-dependent IRF3 nuclear translocation and specific activation of IRF3-responsive promoters. Prime-boost immunization of mice with a suboptimal dose of a monovalent pandemic influenza split virus H1N1 A/California/07/2009 vaccine plus KIN1148 protected against a lethal challenge with mouse-adapted influenza virus (A/California/04/2009) and induced an influenza virus-specific IL-10 and Th2 response by T cells derived from lung and lung-draining lymph nodes.

2. CoA, QC data, SDS, and handling instruction

SDS and handling instruction, CoA with copies of QC data (NMR, HPLC and MS analytical spectra) can be downloaded from the product web page under “QC And Documents” section. Note: copies of analytical spectra may not be available if the product is being supplied by MedKoo partners. Whether the product was made by MedKoo or provided by its partners, the quality is 100% guaranteed.

3. Solubility data

Solvent	Max Conc. mg/mL	Max Conc. mM
DMSO	55.25	152.86

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	2.77 mL	13.83 mL	27.67 mL
5 mM	0.55 mL	2.77 mL	5.53 mL
10 mM	0.28 mL	1.38 mL	2.77 mL
50 mM	0.06 mL	0.28 mL	2.77 mL

5. Molarity Calculator, Reconstitution Calculator, Dilution Calculator

Please refer the product web page under section of “Calculator”

6. Recommended literature which reported protocols for in vitro and in vivo study

In vitro study

1. Probst P, Grigg JB, Wang M, Muñoz E, Loo YM, Ireton RC, Gale M Jr, Iadonato SP, Bedard KM. 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. doi: 10.1016/j.vaccine.2017.01.053. Epub 2017 Mar 6. PMID: 28279563.

In vivo study

1. Probst P, Grigg JB, Wang M, Muñoz E, Loo YM, Ireton RC, Gale M Jr, Iadonato SP, Bedard KM. 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. doi: 10.1016/j.vaccine.2017.01.053. Epub 2017 Mar 6. PMID: 28279563.

7. Bioactivity

Biological target:

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

In vitro activity

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KIN1148 induced dose-dependent IRF3 nuclear translocation and specific activation of IRF3-responsive promoters.

Reference: Vaccine. 2017 Apr 4;35(15):1964-1971. <https://pubmed.ncbi.nlm.nih.gov/28279563/>

In vivo activity

Prime-boost immunization of mice with a suboptimal dose of a monovalent pandemic influenza split virus H1N1 A/California/07/2009 vaccine plus KIN1148 protected against a lethal challenge with mouse-adapted influenza virus (A/California/04/2009) and induced an influenza virus-specific IL-10 and Th2 response by T cells derived from lung and lung-draining lymph nodes.

Reference: Vaccine. 2017 Apr 4;35(15):1964-1971. <https://pubmed.ncbi.nlm.nih.gov/28279563/>

Note: The information listed here was extracted from literature. MedKoo has not independently retested and confirmed the accuracy of these methods. Customer should use it just for a reference only.