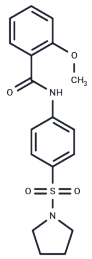
# Data Sheet (Cat.No.T203076)

TargetMol

IRF1-IN-2

## Chemical Properties



CAS No. : 708245-32-3

Formula: C18H20N2O4S

Molecular Weight: 360.43

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

## Biological Description

| | |
|---|---|
| Description | IRF1-IN-2 is a small molecule inhibitor of interferon regulatory factor 1 (IRF1) that functions by reducing the binding affinity of IRF1 for the caspase-1 (CASP1) gene promoter. this inhibition subsequently suppresses critical cell death signaling pathways, such as pyroptosis, and provides robust protection against ionizing radiation-induced skin inflammatory damage in preclinical models. |
| Targets(IC50) | Caspase,Glutathione Peroxidase,Pyroptosis,IFNAR,Interleukin,PARP |
| In vitro | Pretreatment of irradiated HaCaT cells, HELF and WS1 cells with IRF1-IN-2 (20 μM, 12h) reduced the recruitment of IRF1 to the CASP1 promoter in HaCaT cells (20Gy) and also attenuated IRF1 activation induced by NSP-10 plasmid transfection in HELF and WS1 cells. [1] |
| In vivo | **Methods**: IRF1-IN-2 (100 μg/d, subcutaneous injection, irradiated every other day) was administered to mice with inflammatory skin lesions induced by 35 Gy radiation, and its effects were observed. **Results**: IRF1-IN-2 has a potential protective effect against inflammatory skin lesions induced by 35 Gy radiation in mice. [1] |

## Solubility Information

| | |
|---|---|
| Solubility | DMSO: 105 mg/mL (291.32 mM),Sonication is recommended.<br>(< 1 mg/ml refers to the product slightly soluble or insoluble) |

Preparing Stock Solutions

| | 1mg | 5mg | 10mg |
|---|---|---|---|
| 1 mM | 2.7745 mL | 13.8723 mL | 27.7446 mL |
| 5 mM | 0.5549 mL | 2.7745 mL | 5.5489 mL |
| 10 mM | 0.2774 mL | 1.3872 mL | 2.7745 mL |
| 50 mM | 0.0555 mL | 0.2774 mL | 0.5549 mL |

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Geng, et al. Chaperone- and PTM-mediated activation of IRF1 tames radiation-induced cell death and the inflammatory response. Cell Mol Immunol. 2024 Aug;21(8):856-872.