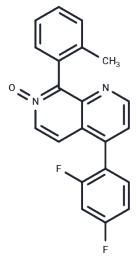
# Data Sheet (Cat.No.T16424)

TargetMol

## p38 MAPK-IN-1

### Chemical Properties



CAS No. : 1006378-90-0

Formula: C21H14F2N2O

Molecular Weight: 348.35

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 | p38 MAPK-IN-1 is a novel selective p38 MAPK inhibitor with high potency, long duration, and low clearance, which reduces inflammatory responses by inhibiting LPS-induced TNF-α production. |
| Targets(IC50) | Autophagy,p38 MAPK |
| In vivo | Methods: p38 MAPK-IN-1 (1 mg/kg, intravenous injection and; 10 mg/kg, oral administration) was administered to male wistar rats for in vivo pharmacokinetic study. Results: p38 MAPK-IN-1 had a t1/2 of 7.4 hours and an intravenous CL of 2.7 mL/min/kg. The Cmax of p38 MAPK-IN-1 in male wistar rats after oral administration was 5.3 μM. [1] |

### Solubility Information

| | |
|---|---|
| Solubility | DMSO: 20 mg/mL (57.41 mM),Sonication is recommended.<br>(< 1 mg/ml refers to the product slightly soluble or insoluble) |
| In vivo Formulation | 10% DMSO+40% PEG300+5% Tween-80+45% Saline: 0.5 mg/mL (1.44 mM),Sonication is recommended.<br>*Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.* |

Preparing Stock Solutions

| | 1mg | 5mg | 10mg |
|---|---|---|---|
| 1 mM | 2.8707 mL | 14.3534 mL | 28.7068 mL |
| 5 mM | 0.5741 mL | 2.8707 mL | 5.7414 mL |
| 10 mM | 0.2871 mL | 1.4353 mL | 2.8707 mL |
| 50 mM | 0.0574 mL | 0.2871 mL | 0.5741 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

Lumeras W, et al. 1,7-Naphthyridine 1-oxides as novel potent and selective inhibitors of p38 mitogen activated protein kinase. J Med Chem. 2011 Nov 24;54(22):7899-910.

Wang Q, et al. S100A9 promotes renal calcium oxalate stone formation via activating the TLR4-p38/MAPK-LCN2 signaling pathway. Int J Biol Macromol. 2024 Nov;281(Pt 1):136178.