MAPK13-IN-1

Cat. No.: HY-18850

CAS No.: 229002-10-2

Molecular Formula: $C_{20}H_{23}N_5O_2$

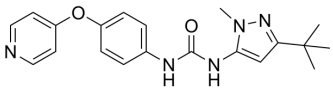
Molecular Weight: 365.43

Target: p38 MAPK; Autophagy

Pathway: MAPK/ERK Pathway; Autophagy

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	1 year
	-20°C	6 months



SOLVENT & SOLUBILITY

In Vitro

DMSO : ≥ 250 mg/mL (684.13 mM)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	2.7365 mL	13.6825 mL	27.3650 mL
5 mM	0.5473 mL	2.7365 mL	5.4730 mL
10 mM	0.2737 mL	1.3683 mL	2.7365 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.08 mg/mL (5.69 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.08 mg/mL (5.69 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (5.69 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

MPAK13-IN-1 is a MAPK13 (p38δ) inhibitor, with an IC_{50} of 620 nM.

IC_{50} & Target

MAPK13 (p38δ)
620 nM (IC_{50})

In Vitro

MPAK13-IN-1 exhibits an IC_{50} of 4.63 μM in vero E6 cells[2].

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

Cell Viability Assay[2]

Cell Line:	Vero E6 cells[2].
Concentration:	0-100 μM.
Incubation Time:	
Result:	Exhibited an IC_{50} of 4.63 μM.

CUSTOMER VALIDATION

- Cell. 2020 Aug 6;182(3):685-712.e19.
- Stem Cells. 2022 May 27;40(5):508-522.
- Stem Cells. 26 February 2022.
- J Biol Chem. 2023 Aug 18;105175.

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REFERENCES

[1]. Yurtsever Z, et al. First comprehensive structural and biophysical analysis of MAPK13 inhibitors targeting DFG-in and DFG-out binding modes. Biochim Biophys Acta. 2016 Nov;1860(11 Pt A):2335-2344.

[2]. Mehdi Bouhaddou, et al. The Global Phosphorylation Landscape of SARS-CoV-2 Infection. Cell. 2020 Aug 6;182(3):685-712.e19.

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