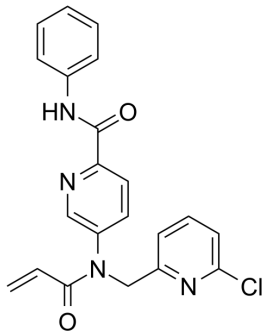
BPK-25

Cat. No.:	HY-141550
CAS No.:	2305052-86-0
Molecular Formula:	$C_{21}H_{17}ClN_4O_2$
Molecular Weight:	392.84
Target:	Others
Pathway:	Others
Storage:	4°C, stored under nitrogen * In solvent : -80°C, 6 months; -20°C, 1 month (stored under nitrogen)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 150 mg/mL (381.83 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.5456 mL	12.7278 mL	25.4557 mL
	5 mM	0.5091 mL	2.5456 mL	5.0911 mL
	10 mM	0.2546 mL	1.2728 mL	2.5456 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: 3.75 mg/mL (9.55 mM); Suspended solution; Need ultrasonic
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 3.75 mg/mL (9.55 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 3.75 mg/mL (9.55 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

BPK-25, an active acrylamide, promotes degradation of nucleosome remodeling and deacetylation (NuRD) complex proteins by a post-translational mechanism involving covalent protein engagement. BPK-25 inhibits TMEM173 activation by the cyclic dinucleotide ligand cGAMP[1].

In Vitro

BPK-25 (10 μM; 5 hours) inhibits TMEM173 activation by the cyclic dinucleotide ligand cGAMP[1].
BPK-25 (10 μM; 24 hours) suppresses NF-κB activation blocks nuclear factor of activated T-cells (NFAT) activation, as measured by >50% reductions in IκBα phosphorylation[1].
BPK-25 (10 μM; 4 hours) also reduces NFATc2 expression in T cells[1].
BPK-25 (0.1, 1, 5, 10, 20 μM; 24 hours) promotes the striking and selective reduction of several proteins in the nucleosome

remodeling and deacetylation (NuRD) complex in a concentration- and time-dependent manner. BPK-25 does not have corresponding changes in mRNA expression[1].
A non-electrophilic propanamide analog of BPK-25 (BPK-25-ctrl) does not suppress T cell activation or affect NuRD complex proteins in T cells[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Ekaterina V Vinogradova, et al. An Activity-Guided Map of Electrophile-Cysteine Interactions in Primary Human T Cells. Cell. 2020 Aug 20;182(4):1009-1026.e29.

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