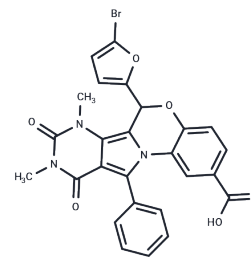


BPO-27 racemate

Chemical Properties

CAS No. :	1314873-02-3
Formula:	C ₂₆ H ₁₈ BrN ₃ O ₆
Molecular Weight:	548.34
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	BPO-27 racemate (BPO-27 (racemate)) is an effective CFTR inhibitor with IC ₅₀ of 8 nM.
Targets(IC ₅₀)	CFTR, Autophagy
In vitro	The R enantiomer of BPO-27 inhibits CFTR chloride conductance (IC ₅₀ : 4 nM), while S enantiomer is inactive. In vitro metabolic stability in hepatic microsomes shows both enantiomers as stable, with less than 5% metabolism in 4 h [1]. (R)-BPO-27 binds near the canonical ATP binding site. Whole-cell patch-clamp studies show linear CFTR currents with a voltage-independent (R)-BPO-27 block mechanism. At a concentration of (R)-BPO-27 that inhibits CFTR chloride current by 50%, the EC ₅₀ for ATP activation of CFTR increases from 0.27 to 1.77 mM [2].
In vivo	Following bolus intraperitoneal administration of BPO-27 in mice, serum (R)-1 decays with t _{1/2} ≈ 1.6 h and gives sustained therapeutic concentrations in the kidney [1].

Solubility Information

Solubility	DMSO: 55 mg/mL (100.3 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+90% Corn Oil: 1.67 mg/mL (3.05 mM), Sonication is recommended. <i>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.</i>

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.8237 mL	9.1184 mL	18.2369 mL
5 mM	0.3647 mL	1.8237 mL	3.6474 mL
10 mM	0.1824 mL	0.9118 mL	1.8237 mL
50 mM	0.0365 mL	0.1824 mL	0.3647 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

Kim Y, et al. Benzopyrimido-pyrrolo-oxazine-dione (R)-BPO-27 Inhibits CFTR Chloride Channel Gating by Competition with ATP. *Mol Pharmacol*. 2015 Oct;88(4):689-96.

Snyder DS, et al. Absolute Configuration And Biological Properties of Enantiomers of CFTR Inhibitor BPO-27. *ACS Med Chem Lett*. 2013 May 9;4(5):456-459.

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