

Rheb inhibitor NR1

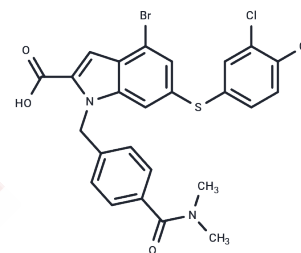
Chemical Properties

CAS No. : 2216763-38-9

Formula: C₂₅H₁₉BrCl₂N₂O₃S

Molecular Weight: 578.3

Storage: Store at low temperature, Keep away from direct sunlight
 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	Rheb inhibitor NR1 is a selective mTORC1 inhibitor that suppresses the phosphorylation of T389pS6K1 and enhances the phosphorylation of S473pAKT.
Targets(IC50)	mTOR
In vivo	In male C57BL/6 mice aged 6-7 weeks (fasted for 16 hours), administration of the Rheb inhibitor NR1 (30 mg/kg; intraperitoneal injection; single dose) resulted in significantly reduced mTORC1 activity in both kidney and skeletal muscle. Additionally, a clear band shift for T37/464E-BP1 was observed in skeletal muscle[1].

Solubility Information

Solubility	DMSO: 50 mg/mL (86.46 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+90% Saline: < 5 mg/mL (8.65 mM), Lower concentrations may be soluble, but exact solubility limit is unknown. 10% DMSO+90% Corn oil: 5 mg/mL (8.65 mM), Solution. 10% DMSO+90% (20% SBE- β -CD in Saline): < 5 mg/mL (8.65 mM), Lower concentrations may be soluble, but exact solubility limit is unknown. 10% DMSO+40% PEG300+5% Tween 80+45% Saline: < 5 mg/mL (8.65 mM), Lower concentrations may be soluble, but exact solubility limit is unknown. <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	1.7292 mL	8.646 mL	17.2921 mL
5 mM	0.3458 mL	1.7292 mL	3.4584 mL
10 mM	0.1729 mL	0.8646 mL	1.7292 mL
50 mM	0.0346 mL	0.1729 mL	0.3458 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

Mahoney SJ, et al. A small molecule inhibitor of Rheb selectively targets mTORC1 signaling. Nat Commun. 2018 Feb 7;9(1):548.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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