

AR-C155858

Chemical Properties

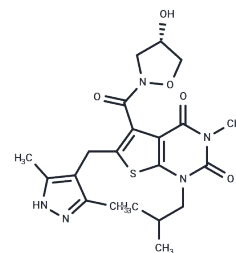
CAS No. : 496791-37-8

Formula: C₂₁H₂₇N₅O₅

Molecular Weight: 461.53

Storage: Store at low temperature, Keep away from moisture
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	AR-C155858 is an inhibitor of monocarboxylate transporter MCT1 and MCT2 (K _i : 2.3 nM and 10 nM).
Targets(IC ₅₀)	Monocarboxylate transporter
In vitro	AR-C155858, at concentrations ranging from 10 nM to 100 nM, effectively inhibits the activity of MCT1/MCT2 C-terminal chimeras[1]. This compound also demonstrates time- and concentration-dependent inhibition of MCT1 when expressed in <i>Xenopus</i> oocytes [2]. Furthermore, AR-C155858 exhibits an inhibitory effect on MCT2, achieving 70% inhibition at 10 nM, with inhibition levels increasing gradually, indicative of a dissociation constant (K _i) value significantly lower than 10 nM.

Solubility Information

Solubility	DMSO: 40 mg/mL (86.67 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (4.33 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	2.1667 mL	10.8335 mL	21.6671 mL
5 mM	0.4333 mL	2.1667 mL	4.3334 mL
10 mM	0.2167 mL	1.0834 mL	2.1667 mL
50 mM	0.0433 mL	0.2167 mL	0.4333 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

Ovens MJ, et al. The inhibition of monocarboxylate transporter 2 (MCT2) by AR-C155858 is modulated by the associated ancillary protein. *Biochem J.* 2010 Oct 15;431(2):217-25.

Ovens MJ, et al. AR-C155858 is a potent inhibitor of monocarboxylate transporters MCT1 and MCT2 that binds to an intracellular site involving transmembrane helices 7-10. *Biochem J.* 2010 Jan 15;425(3):523-30.

Vijay N, et al. A Novel Monocarboxylate Transporter Inhibitor as a Potential Treatment Strategy for γ -Hydroxybutyric Acid Overdose. *Pharm Res.* 2015 Jun;32(6):1894-906.

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