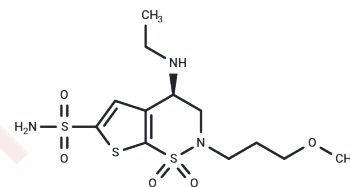


Brinzolamide

Chemical Properties

CAS No. :	138890-62-7
Formula:	C ₁₂ H ₂₁ N ₃ O ₅ S ₃
Molecular Weight:	383.51
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	Brinzolamide (AL-4862) is a Carbonic Anhydrase Inhibitor. Its mechanism of action involves inhibiting the enzyme Carbonic Anhydrase.
Targets(IC50)	Carbonic Anhydrase
In vitro	A 0.6 mg dose of Brinzolamide ophthalmic suspension reduces intraocular pressure in a dose-dependent manner in cynomolgus monkeys post-laser glaucoma surgery. Similarly, it lowers intraocular pressure in Dutch belted rabbits. Dosages of 1 mg/kg, 10 mg/kg, and 30 mg/kg of Brinzolamide prolong the sleep time induced by barbital in male CD-1 mice by 57%, 15%, and 35%, respectively. Less than 3% of Brinzolamide significantly increases both the percentage reduction and the mean decrease in intraocular pressure among patients with primary open-angle glaucoma or ocular hypertension compared to a placebo group. Additionally, a 2% Brinzolamide solution enhances optic nerve head blood flow and reduces intraocular pressure in resting Dutch belted rabbits.

Solubility Information

Solubility	H ₂ O: < 1 mg/mL (insoluble or slightly soluble), Ethanol: < 1 mg/mL (insoluble or slightly soluble), DMSO: 60 mg/mL (156.45 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 (5.21 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	2.6075 mL	13.0375 mL	26.0749 mL
5 mM	0.5215 mL	2.6075 mL	5.215 mL
10 mM	0.2607 mL	1.3037 mL	2.6075 mL
50 mM	0.0521 mL	0.2607 mL	0.5215 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

- DeSantis L, et al. *Surv Ophthalmol*, 2000, Suppl 2, S119-129.
- Silver LH, et al. *Surv Ophthalmol*, 2000, 44 Suppl 2, S147-153.
- Kaup M, et al. *Br J Ophthalmol*, 2004, 88(2), 257-262.
- Barnes GE, et al. *Surv Ophthalmol*, 2000, 44 Suppl 2, S131-140.
- Yamada M, et al. *J Cereb Blood Flow Metab*, 2000, 20(4), 709-717.

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