

Benzthiazide

Chemical Properties

CAS No. : 91-33-8

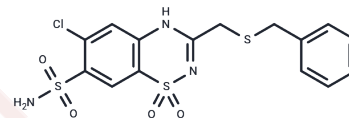
Formula: C₁₅H₁₄ClN₃O₄S₃

Molecular Weight: 431.94

Store at low temperature

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	Benzthiazide (Lemazide) is used in the therapy of edema and hypertension. Like other thiazides, benzthiazide accelerates water loss from the body (diuretics). They inhibit Na ⁺ /Cl ⁻ reabsorption from the distal convoluted tubules in the kidneys. Thiazides also cause loss of potassium and an increase in serum uric acid. Thiazides are often used to treat hypertension, but their hypotensive effects are not necessarily due to their diuretic activity. Thiazides have been shown to prevent hypertension-related morbidity and mortality although the mechanism is not fully understood. Thiazides cause vasodilation by activating calcium-activated potassium channels (large conductance) in vascular smooth muscles and inhibiting various carbonic anhydrases in vascular tissue.
Targets(IC50)	Carbonic Anhydrase

Solubility Information

Solubility	DMSO: 50 mg/mL (115.76 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: 5 mg/mL (11.58 mM),Solution. 10% DMSO+90% Saline: < 5 mg/mL (11.58 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	2.3151 mL	11.5757 mL	23.1514 mL
5 mM	0.463 mL	2.3151 mL	4.6303 mL
10 mM	0.2315 mL	1.1576 mL	2.3151 mL
50 mM	0.0463 mL	0.2315 mL	0.463 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

Temperini C, et al. Bioorg Med Chem. 2009 Feb 1;17(3):1214-21.

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