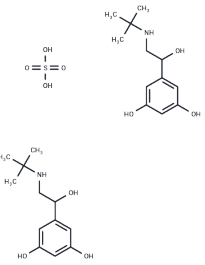
Data Sheet (Cat.No.T1584)

TargetMol

Terbutaline Sulfate

Chemical Properties



CAS No. : 23031-32-5

Formula: C12H19NO3·1/2H2SO4

Molecular Weight: 274.32

Storage: Keep away from direct sunlight,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	Terbutaline Sulfate (Terbutaline hemisulfate) is a selective beta-2 adrenergic agonist used as a bronchodilator and tocolytic.
Targets(IC50)	Antibacterial,Adrenergic Receptor,Antibiotic
In vitro	Terbutaline acts on the β2 receptors in the bronchial, vascular, and uterine smooth muscles, stimulating them. It also exerts an effect on uterine smooth muscles by inhibiting contractions.
In vivo	In all BChE variants, Terbutaline exhibits reversible competitive inhibition, with dissociation constants (Kd) of 0.18 mM for UU, 0.31 mM for FF, and 3.3 mM for AA homozygotes. Additionally, Terbutaline facilitates bronchodilation by selectively targeting β2-adrenergic receptors.
Kinase Assay	Immunoprecipitation-HDAC assays: The lysate of Jurkat cells is incubated for 1 hour on ice and cleared by centrifugation at 12,000 g for 10 minutes at 4 °C. Supernatants are precleared with 30 μL of 50% protein G-Sepharose slurry for 1 hour at 4 °C. Beads are pelleted by centrifugation and supernatants are incubated for 1 hour at 4 °C with 10 μg of IgG fraction from anti-HDAC1 or HDAC3 polyclonal antisera (preincubated 2 hours at room temperature with either the homologous or heterologous immunizing peptide). Both antisera are raised in rabbits against the carboxylterminal peptide of HDAC1 and HDAC3 by using synthetic peptides coupled to keyhole limpet hemocyanin. 30 μL of 50% protein G-Sepharose slurry is added for 1 hour at 4 °C. Immune complexes are pelleted by centrifugation and washed three times with 1 mL of lysis buffer. Beads are resuspended in 200 μL of HDAC buffer (20 mM Tris-HCl, pH 8.0/150 mM NaCl/10% glycerol), and the HDAC assay is performed with an 3H-acetylated peptide corresponding to amino acids 1-24 of histone H4. Released [3H]acetic acid is quantified by scintillation counting. For inhibitions studies, the immunoprecipitated complexes are preincubated with the different concentrations of Vorinostat for 30 minutes at 4 °C.

Solubility Information

Solubility	DMSO: 250 mg/mL (911.34 mM),Sonication is recommended. H2O: 100 mg/mL (364.54 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: 1 mg/mL (3.65 mM),Sonication is recommended. *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.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.6454 mL	18.2269 mL	36.4538 mL
5 mM	0.7291 mL	3.6454 mL	7.2908 mL
10 mM	0.3645 mL	1.8227 mL	3.6454 mL
50 mM	0.0729 mL	0.3645 mL	0.7291 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

Petersson BA. Allergy, 1984, 39(5), 351-357.
Kovarik Z, J Enzyme Inhib Med Chem, 2004, 19(2), 113-7.
Hochhaus G, et al. Int J Clin Pharmacol Ther Toxicol, 1992, 30(9), 342-362.