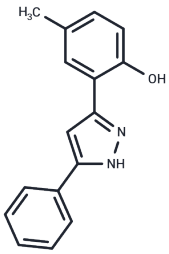
Data Sheet (Cat.No.T29114)

TargetMol

VRT-532

Chemical Properties



CAS No. : 38214-71-0

Formula: C16H14N2O

Molecular Weight: 250.3

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	VRT-532 (CFpot-532) is an effective modulator of CFTR and is commonly used in studies of cystic fibrosis (CF) caused by CFTR defects. Modification of CFTR by this small molecule modulator can increase arylsulfatase B (ARSB), which is necessary to reduce the accumulation of sulphate glycosaminosaccharide (gag), thus reducing the accumulation of 4-chondroitin sulfate in cystic fibrosis.
Targets(IC50)	CFTR
In vitro	VRT-532 binds directly to G551D-CFTR in isolated systems, thereby improving its channel function and increasing its ATPase rate. VRT-325 decreased the apparent ATP affinity of purified and reconstituted F508del-CFTR[1].

Solubility Information

Solubility	DMSO: 2.51 mg/mL (10.03 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 (4 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	3.9952 mL	19.976 mL	39.9521 mL
5 mM	0.799 mL	3.9952 mL	7.9904 mL
10 mM	0.3995 mL	1.9976 mL	3.9952 mL
50 mM	0.0799 mL	0.3995 mL	0.799 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

Pasyk S, et al. Direct interaction of a small-molecule modulator with G551D-CFTR, a cystic fibrosis-causing mutation associated with severe disease. Biochem J. 2009 Feb 15;418(1):185-90.
Kim Chiaw P, et al. A chemical corrector modifies the channel function of F508del-CFTR. Mol Pharmacol. 2010 Sep;78(3):411-8.
Pettit RS, Fellner C. CFTR Modulators for the Treatment of Cystic Fibrosis. P T. 2014 Jul;39(7):500-11.
Conger BT, et al. Comparison of cystic fibrosis transmembrane conductance regulator (CFTR) and ciliary beat frequency activation by the CFTR Modulators Genistein, VRT-532, and UCCF-152 in primary sinonasal epithelial cultures. JAMA Otolaryngol Head Neck Surg. 2013 Aug 1;139(8):822-7.