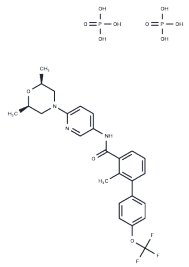
Data Sheet (Cat.No.T15727)

TargetMol

Sonidegib diphosphate

Chemical Properties



CAS No. : 1218778-77-8

Formula: C26H32F3N3O11P2

Molecular Weight: 681.49

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	Sonidegib diphosphate (LDE225 diphosphate) is a selective antagonist of Smo that inhibits murine Smo (IC50:1.3 nM) and human Smo (IC50:2.5 nM).
Targets(IC50)	Smo
In vitro	**METHODS**: Sonidegib diphosphate (LDE225 diphosphate) (10, 100nM, 72 hours) was treated in CD34 CP-CML cells and its effect on GLI1 expression in CD34 CP-CML cells was assessed. **RESULTS** No changes in GLI1 were observed in CD34 CP-CML cells at 6 and 24 h; at 72 h, GLI1 was significantly downregulated (10 nM; 0.78-fold and 100 nM; 0.73-fold). [2]
In vivo	**METHODS**: A transgenic EGFP/SCLtTA/TRE-BCR-ABL mouse model was used, and mice were treated with nilotinib (50 mg/kg, gavage, daily, 3 weeks), Sonidegib diphosphate (LDE225 diphosphate) (80 mg / kg, gavage, daily, 3 weeks), Sonidegib diphosphate (LDE225 diphosphate) + nilotinib, or carrier alone (control) treatment, to study the effects of Sonidegib diphosphate (LDE225 diphosphate) treatment on CML LSC in vivo. **RESULTS** The cohort treated with Sonidegib diphosphate (LDE225 diphosphate) had a small, non-significant incremental reduction in mean body weight; Sonidegib diphosphate (LDE225 diphosphate) alone reduced splenic LTHSC but did not significantly reduce GMP and CMP ; Sonidegib diphosphate (LDE225 diphosphate) + nilotinib significantly reduced GMP, CMP, and LTHSC in the spleen. in contrast, in the BM of mice treated with Sonidegib diphosphate (LDE225 diphosphate), nilotinib, or the combination there were no significant changes in the amounts of GMP, CMP and LTHSC. [2]

Solubility Information

Solubility	DMSO: 99 mg/mL (145.27 mM),Sonication is recommended. H2O: Insoluble (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 3.3 mg/mL (4.84 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*

In vivo Formulation	*vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.4674 mL	7.3369 mL	14.6737 mL
5 mM	0.2935 mL	1.4674 mL	2.9347 mL
10 mM	0.1467 mL	0.7337 mL	1.4674 mL
50 mM	0.0293 mL	0.1467 mL	0.2935 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

Pan S, et al. Discovery of NVP-LDE225, a Potent and Selective Smoothened Antagonist. ACS Med Chem Lett. 2010 Mar 16;1(3):130-4.

Irvine DA, et al. Deregulated hedgehog pathway signaling is inhibited by the smoothened antagonist LDE225 (Sonidegib) in chronic phase chronic myeloid leukaemia. Sci Rep. 2016 May 9;6:25476.

Ma W, et al. Reduced Smoothened level rescued Aβ-induced memory deficits and neuronal inflammation in animal models of Alzheimer's disease. J Genet Genomics. 2018 May 20;45(5):237-246.