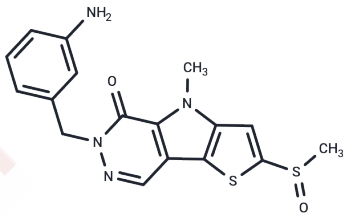
Data Sheet (Cat.No.T7214)

TargetMol

TEPP-46

Chemical Properties



CAS No. : 1221186-53-3

Formula: C17H16N4O2S2

Molecular Weight: 372.46

Storage: Store at low temperature
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	TEPP-46 (ML265) is an activator of pyruvate kinase M2 (PKM2) (AC50=92 nM), selective for PKM1, PKL and PKR. TEPP-46 has antitumor activity.
Targets(IC50)	PKM
In vitro	**METHODS**: Human hepatocellular carcinoma cells, HepG2, were treated with TCEP hydrochloride (100-400 μM) for 3 days, and cell viability was measured by MTT assay. **RESULTS**: The viability of HepG2 was significantly reduced to 25.68% and 70.92% after treatment with 200 and 400 μM TCEP for 3 days, whereas the lowest concentration of TCEP (100 μM) did not significantly reduce the viability of HepG2 (3.44%). [1] **METHODS**: Human peripheral blood mononuclear cell PBMCs were treated with TCEP hydrochloride (0.5-1 mM) for 24 h. Morphological and necrotic changes were assessed by Hoechst 33342/PI staining. **RESULTS**: Necrosis was observed in cells treated with 0.5 mM of TCEP. [2]
In vivo	**METHODS**: To investigate the neurotoxicity and its mechanism in mice, TCEP hydrochloride (10-100 mg/kg) was administered by gavage to Kunming mice once a day for 30 days. **RESULTS**: Compared with the control group, the water intake of high-dose TCEP group was declined significantly, and the organ index of liver and spleen were increased significantly. In addition, the escape latency of TCEP exposed mice were longer than that in the control group in water maze test, while the total swimming course of high-dose TCEP group was elevated and the swimming time in target quadrant was obviously shortened compared with the control group. TCEP exposure can cause neurotoxicity by increasing thyroid hormones and inducing oxidative damage in mice. [3]

Solubility Information

Solubility	DMSO: 83.3 mg/mL (223.65 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 (13.42 mM),Solution. *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	2.6849 mL	13.4243 mL	26.8485 mL
5 mM	0.537 mL	2.6849 mL	5.3697 mL
10 mM	0.2685 mL	1.3424 mL	2.6849 mL
50 mM	0.0537 mL	0.2685 mL	0.537 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

Mohammad GH, et al. Targeting Pyruvate Kinase M2 and Lactate Dehydrogenase A Is an Effective Combination Strategy for the Treatment of Pancreatic Cancer. Cancers (Basel). 2019 Sep 16;11(9):1372.
Deng H, Qian X, Zhang Y, et al.Metformin Increases the Response of Cholangiocarcinoma Cells to Gemcitabine by Suppressing Pyruvate Kinase M2 to Activate Mitochondrial Apoptosis.Digestive Diseases and Sciences.2024: 1-15.
Angiari S, et al. Pharmacological Activation of Pyruvate Kinase M2 Inhibits CD4+ T Cell Pathogenicity and Suppresses Autoimmunity. Cell Metab. 2020 Feb 4;31(2):391-405.e8.
Anastasiou D, et al. Pyruvate kinase M2 activators promote tetramer formation and suppress tumorigenesis. Nat Chem Biol. 2012 Oct;8(10):839-47.