

TG003

Chemical Properties

CAS No. : 719277-26-6

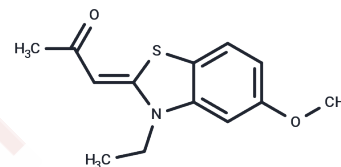
Formula: C₁₃H₁₅NO₂S

Molecular Weight: 249.33

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	TG003 is a potent Clk1/Sty inhibitor that inhibits Clk1 and Clk4, inhibits cancer cell growth and induces apoptosis, and can be used in the study of Duchenne muscular dystrophy.
Targets(IC50)	CDK
In vitro	The small drug TG003 increases endogenous expression of p53 β and p53 γ protein isoforms by modulation of TP53 intron 9 alternative splicing. [1] TG003 exhibits the most potent effect on Clk1/Sty and Clk4 (IC ₅₀ , 15-20 nM) with lesser effect on Clk2 (IC ₅₀ =200 nM). TG003 inhibits SF2/ASF-dependent splicing of β -globin pre-mRNA in vitro by suppression of Clk-mediated phosphorylation. [2]
In vivo	Intrathecal injection of either TG003 (1-100 pM) or IC261 (0.1-1 nM) dose-dependently reduces mechanical allodynia and thermal hyperalgesia induced by carrageenan or CFA. [3]

Solubility Information

Solubility	DMSO: 100 mg/mL (401.07 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: 4 mg/mL (16.04 mM),Sonication is recommended. <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	4.0107 mL	20.0537 mL	40.1075 mL
5 mM	0.8021 mL	4.0107 mL	8.0215 mL
10 mM	0.4011 mL	2.0054 mL	4.0107 mL
50 mM	0.0802 mL	0.4011 mL	0.8021 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

Marcel V, et al. Modulation of p53 β and p53 γ expression by regulating the alternative splicing of TP53 gene modifies cellular response. *Cell Death Differ.* 2014 Sep;21(9):1377-87.

Muraki M, et al. Manipulation of alternative splicing by a newly developed inhibitor of Clks. *J Biol Chem.* 2004 Jun 4; 279(23):24246-54.

Kurihara T, et al. Alleviation of behavioral hypersensitivity in mouse models of inflammatory pain with two structurally different casein kinase 1 (CK1) inhibitors. *Mol Pain.* 2014 Mar 10;10:17.

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