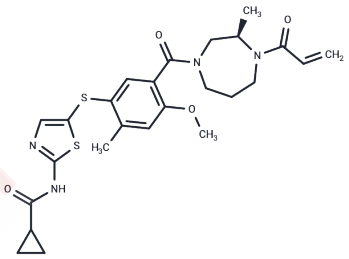
Data Sheet (Cat.No.T87429)

TargetMol

Soquelitinib

Chemical Properties



CAS No. : 2226636-04-8

Formula: C25H30N4O4S2

Molecular Weight: 514.66

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	Soquelitinib (CPI-818) is a covalent, irreversible, oral and selective ITK inhibitor that preferentially inhibits Th2 cytokine production over Th1, inhibits in vivo tumor growth in mice, and decreases markers of T-cell exhaustion, resulting in an increase in tumor infiltration and up-regulation of CXCR3, IFNγ, TNFα, and CD107a expression in normal CD8 cells.
Targets(IC50)	COX,CXCR,IL Receptor,Immunology/Inflammation related,TNF,Tyrosine Kinases
In vitro	In Jurkat T cells, Soquelitinib inhibits downstream TCR signaling (e.g., phosphorylation of PLCγ1 and ERK) and suppresses IL-2 secretion (IC_{50} = 136 nM). Soquelitinib downregulates Th2 cytokines (IL-4, IL-5, IL-13) and promotes Th1 skewing. In repeatedly stimulated human CD8 T cells, 1 μM soquelitinib reduces exhaustion markers (PD1, LAG3, TIGIT, Tim3) and restores effector functions, increasing IFNγ and Granzyme B levels[1].
In vivo	Oral administration of soquelitinib (30 mg/kg, b.i.d.) significantly inhibited tumor growth in multiple murine tumor models (CT26, RENCA, B16F10, EL4, A20). Soquelitinib enhanced CD8+ T-cell infiltration and cytotoxic activity (e.g., increased IFNγ, TNF, Perforin). Combined treatment with anti-PD-1 or CTLA-4 antibodies showed synergistic effects, with complete tumor regression in some cases and reduced expression of exhaustion markers in TILs. Long-term oral dosing in rats showed no observable toxicity (NOAEL >1000 mg/kg)[1].

Solubility Information

Solubility	DMSO: 80 mg/mL (155.44 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: 10 mg/mL (19.43 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	1.943 mL	9.7152 mL	19.4303 mL
5 mM	0.3886 mL	1.943 mL	3.8861 mL
10 mM	0.1943 mL	0.9715 mL	1.943 mL
50 mM	0.0389 mL	0.1943 mL	0.3886 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

Hsu L Y, et al. Selective inhibition of interleukin-2 inducible T cell kinase (ITK) enhances anti-tumor immunity in association with Th1-skewing, cytotoxic T cell activation, and reduced T cell exhaustion[J]. bioRxiv, 2023: 2023.07.05.547822.