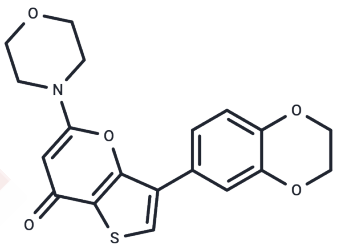
Data Sheet (Cat.No.T3986)

TargetMol

SF2523

Chemical Properties



CAS No. : 1174428-47-7

Formula: C19H17NO5S

Molecular Weight: 371.41

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	SF2523 is a highly selective and potent inhibitor (SF2523) with improved physicochemical properties, excellent aqueous solubility, and biological efficacy. It is typically used in genome editing [CRISPR/Cas Solution] technology and can effectively enhance the efficiency of this process.
Targets(IC50)	Epigenetic Reader Domain,DNA-PK,mTOR,PI3K
In vitro	Treatment with SF2523 leads to a reduction in the protein levels of MYCN and Cyclin D1, targets of MYCN. It also impedes AKT activation by preventing the phosphorylation at Ser473 and results in the removal of BRD4 from MYCN promoter sites. SF2523 exhibits a strong interaction with full-length BRD4 (Kd=140 nM), showing a similar affinity for BRD4's first bromodomain (BD1) (Kd=150 nM) but a weaker affinity for its second bromodomain (BD2) (Kd=710 nM). When comparing the binding affinities of SF2523 to bromodomains (BDs) of different proteins, it demonstrates equal binding to BDs of BRD4, BRD2, and BRD3; a moderate binding to BDs of CECR2 and BRDT; and significantly weaker binding to other BDs[1].
In vivo	Treatment with SF2523 significantly reduces tumor volume without causing gross toxicity in mice, as evidenced by stable body weight. Furthermore, tumors in mice treated with SF2523 exhibit notably lower levels of MYCN, pAKT, and Cyclin D1 compared to those in mice treated with the vehicle[1].

Solubility Information

Solubility	DMSO: 10 mg/mL (26.92 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 (2.69 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	2.6924 mL	13.4622 mL	26.9244 mL
5 mM	0.5385 mL	2.6924 mL	5.3849 mL
10 mM	0.2692 mL	1.3462 mL	2.6924 mL
50 mM	0.0538 mL	0.2692 mL	0.5385 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

Andrews FH, et al. Dual-activity PI3K-BRD4 inhibitor for the orthogonal inhibition of MYC to block tumor growth and metastasis. Proc Natl Acad Sci U S A. 2017 Feb 14;114(7):E1072-E1080.