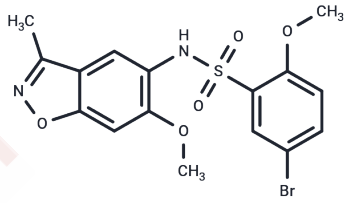
Data Sheet (Cat.No.T5362)

TargetMol

Y06036

Chemical Properties



CAS No. : 1832671-96-1

Formula: C16H15BrN2O5S

Molecular Weight: 427.27

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	Y06036, a potent and selective BET inhibitor, can bind to the BRD4(1) bromodomain (Kd: 82 nM).
Targets(IC50)	Epigenetic Reader Domain
In vitro	Y06036 bounds to the BRD4(1) bromodomain with Kd values of 82 nM. Y06036 potently inhibited cell growth, colony formation, and the expression of AR, AR-regulated genes, and MYC in prostate cancer cell lines.
In vivo	The mice were randomized and intraperitoneally (i.p.) treated with either vehicle or BET inhibitor Y06036 (50 mg/kg, 5 times per week) when the tumor volume reached approximately 100 mm3. Y06036 exhibited strong antitumor activities during the 25-day treatment period, with a tumor growth inhibition (TGI) of 70%.
Cell Research	LNCaP, C4-2B, 22Rv1, and VCaP prostate cancer cells were cultured in RPMI 1640 with 10% FBS at 37 °C and an atmosphere of 5% CO2. For cell viability, cells were seeded in 384-well plates at 500?1000 cells per well (optimum density for growth) in a total volume of 20 μL of media. After 12 h, 10 μL of chemical compounds with 2-fold or 3-fold serial dilution was added to each well with final concentration from 5 nM to 100 μM. The measurement was conducted 96 h after seeded for LNCaP, C4-2B, and 22Rv1 and 144 h after seeded for VCaP. Then, 25 μL of CellTiter-GLO reagents was added, and luminescence was measured on GLOMAX microplate luminometer, according to the manufacturer's instructions. The estimated in vitro half-maximal inhibitory concentration (IC50) values were calculated using Prism 6 software.
Animal Research	Four-week-old male mice (strain: C.B-17/IcrHsd-Prkdcscid for C4-2B) were used for tumor inoculation. Each mouse was inoculated subcutaneously at the dorsal flank on both sides of the mice with C4-2B tumor cells (2 × 10^6 cells) in a mixture of 100 μL PBS and Matrigel (1:1). When the tumor volume reached approximately 100 mm3, the mice were randomized into groups (n = 5?7 per group) and then treated intraperitoneally (ip) with 100 μL of either vehicle or Y06036 and 7m (in a formulation of 15% Cremophor EL, Calbiochem, 82.5% PBS, and 2.5% DMSO) five times per week. The length (L) and width (W) of the tumor mass were monitored by calipers, and volume was expressed in mm3 calculated with the equation V = (π/6)(L × W2). Tumor growth inhibition (TGI) was calculated using the equation TGI = [1 ? (T ? T0)/(C ? C0)] × 100, wherein T and T0 are the mean tumor volumes on a specific experimental day and on the first day of treatment, respectively, for the test groups; and likewise C and C0 are the mean tumor volumes for

Animal Research	the vehicle group.

Solubility Information

Solubility	DMSO: 100 mg/mL (234.04 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 (9.36 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	2.3404 mL	11.7022 mL	23.4044 mL
5 mM	0.4681 mL	2.3404 mL	4.6809 mL
10 mM	0.234 mL	1.1702 mL	2.3404 mL
50 mM	0.0468 mL	0.234 mL	0.4681 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

Zhang M, et al. Structure-Based Discovery and Optimization of Benzo[d]isoxazole Derivatives as Potent and Selective BET Inhibitors for Potential Treatment of Castration-Resistant Prostate Cancer (CRPC). J Med Chem. 2018 Apr 12;61(7):3037-3058.