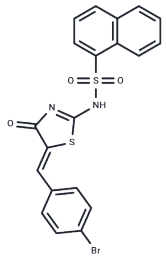
Data Sheet (Cat.No.T26357)

TargetMol

Pitstop 2

Chemical Properties



CAS No. : 1419320-73-2

Formula: C20H13BrN2O3S2

Molecular Weight: 473.36

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	Pitstop2 is an amphipathic protein-bound inhibitor of the clathrin terminal domain (IC50=12 μM) with selectivity. Pitstop2 severely interferes with receptor-mediated endocytosis, HIV entry and synaptic vesicle cycling. Pitstop2 has antitumor activity.
Targets(IC50)	Apoptosis
In vitro	**METHODS**: HeLa cells were pre-incubated with Pitstop2 (10-30 μM) for 15 min, followed by incubation with Alexa568-Tf for 15 min, and transferrin (Tf) uptake was detected by live cell microscopy. **RESULTS**: HeLa cells efficiently internalized Tf into perinuclear circulating endosomes when exposed to Alexa56-Tf. Preincubation of HeLa cells with Pitstop2 resulted in a dose-dependent inhibition of Tf uptake with IC50 values of 12-15 μM, which was very similar to that measured by in vitro blockade of the function of lattice protein TD. [1] **METHODS**: Asynchronously growing HeLa cells were treated with Pitstop2 (0.001-100 μM) for 6 h and assayed for mitotic index. **RESULTS**: Acute treatment of HeLa cells with Pitstop2 for 6 h resulted in a significant increase in mitotic index, suggesting that Pitstop2 activates the SAC. The effect of Pitstop2 on mitotic index was concentration-dependent, and significant at concentrations as low as 0.01 μM. [2]

Solubility Information

Solubility	DMSO: 22 mg/mL (46.48 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: 2 mg/mL (4.23 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	2.1126 mL	10.5628 mL	21.1256 mL
5 mM	0.4225 mL	2.1126 mL	4.2251 mL
10 mM	0.2113 mL	1.0563 mL	2.1126 mL
50 mM	0.0423 mL	0.2113 mL	0.4225 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

von Kleist L, et al. Role of the clathrin terminal domain in regulating coated pit dynamics revealed by small molecule inhibition. Cell. 2011 Aug 5;146(3):471-84.
Smith CM, et al. Inhibition of clathrin by pitstop 2 activates the spindle assembly checkpoint and induces cell death in dividing HeLa cancer cells. Mol Cancer. 2013 Jan 17;12:4.