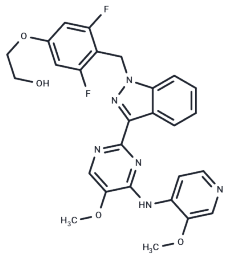
Data Sheet (Cat.No.T10467)

TargetMol

BAY-1816032

Chemical Properties



CAS No. : 1891087-61-8

Formula: C27H24F2N6O4

Molecular Weight: 534.51

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	BAY-1816032 is a benzimidazole budding inhibition relieved homolog protein 1 kinase (BUB1) inhibitor with IC50 of 7 nM and is orally active and abolishes nocodazole-induced Thr-120 phosphorylation of histone H2A, a major BUB1 target protein, in HeLa cells with IC50 of 29 nM.
Targets(IC50)	Others,Serine/threonin kinase
In vitro	**METHODS**: BAY-1816032 (0, 1.5625, 3.125, 6.25, 12.5, 25, 50 μM, 48 hours) treated ATC cells (TPC-1, 8505C), and CCK-8 assay was used to study cell viability. **RESULTS** BAY-1816032 treatment resulted in a decrease in ATC cell viability, with IC50 values of 4.230 μM in TPC-1 cells and 6.216 μM in 8505C cells. [2] **METHODS**: Colony formation assay, cell cycle, invasion, migration and wound healing assay were performed after ATC cells were treated with BAY-1816032 (0, 2.5, 5 μM). **RESULTS** BAY-1816032 can significantly reduce colony formation ability; BAY-1816032 can cause cell cycle arrest similar to siRNA; BAY-1816032 treatment can significantly hinder the invasion and migration of ATC cells in a dose-dependent manner. [2]
In vivo	**METHODS**: BAY-1816032 (100 mg/kg, oral, 24 days) was used to treat 8505C xenograft model mice to evaluate the anti-ATC activity and safety of BAY-1816032 in mice. **RESULTS** There was no significant difference in the body weight of each group of mice; the tumor weight of mice treated with BAY-1816032 was significantly reduced. [2]

Solubility Information

Solubility	H2O: < 0.1 mg/mL (insoluble), DMSO: 25 mg/mL (46.77 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 (3.74 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	1.8709 mL	9.3544 mL	18.7087 mL
5 mM	0.3742 mL	1.8709 mL	3.7417 mL
10 mM	0.1871 mL	0.9354 mL	1.8709 mL
50 mM	0.0374 mL	0.1871 mL	0.3742 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

Siemeister G, et al. BAY 1816032, a novel BUB1 kinase inhibitor with potent antitumor activity [abstract]. In: Proceedings of the American Association for Cancer Research Annual Meeting 2017; 2017 Apr 1-5; Ishington, DC. Philadelphia (PA): AACR; Cancer Res 2017;77(13 Suppl):Abstract nr 287. doi:10.1158/1538-7445.AM2017-287

Jin T, et al. BUB1/KIF14 complex promotes anaplastic thyroid carcinoma progression by inducing chromosome instability. J Cell Mol Med. 2024 Apr;28(7):e18182.