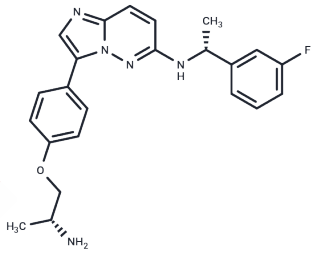
Data Sheet (Cat.No.T38995)

TargetMol

Taletrectinib free base

Chemical Properties



CAS No. : 1505514-27-1

Formula: C23H24FN5O

Molecular Weight: 405.47

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	Taletrectinib free base (AB-106 free base) is a novel potent, selective and orally active ROS1/NTRK inhibitor.Taletrectinib free base has potent inhibitory effects on recombinant ROS1, NTRK1, NTRK2, and NTRK3, with IC50s of 0.207, 0.622, 2.28 and 0.98 nM, respectively, Taletrectinib free base also inhibited ROS1 G2032R and other Crizotinib-resistant ROS1 mutations.
Targets(IC50)	ROS Kinase
In vitro	Taletrectinib free base (1-1000 nM; 72 h) has an IC50 of ~3 -20 nM against Ba/F3-TPM3-NTRK1, Ba/F3-ETV6-NTRK1, -NTRK2, -NTRK3, or KM12 cells.[1] Taletrectinib free base (0.001-1000 nM; 2 h) dose-dependently inhibits ROS1 autophosphorylation in U-118-MG cells in vitro.[1] Taletrectinib free base potently inhibits ROS1 autophosphorylation in JFCR-165, JFCR-168 and MGH193-1B cells.[1] Taletrectinib free base partially inhibits phosphorylated NTRK1 at 10 nM and completely inhibits it at 100 nM. Taletrectinib free base potently inhibits recombinant ROS1, NTRK1, and NTRK3 in an ATP-competitive manner at subnanomolar concentrations. Taletrectinib free base at 0.2 μM almost completely inhibits ACK, ALK, DDR1, and LTK among the 160 kinases but does not strongly inhibit the other 152 kinases in the presence of 1 mM ATP.[1] Taletrectinib free base effectively inhibits crizotinib-resistant ROS1 secondary mutations, including the G2032R solvent front mutation.[1]
In vivo	Taletrectinib free base (DS-6051b) (25 - 200 mg/kg; oral; once daily for 18 days) demonstrates anti-tumor activity in Balb-c nu/nu mice bearing U-118 MG cells. Taletrectinib free base (6.25 - 200 mg/kg; oral; once daily for 8 days) inhibits NTRK-rearranged cancer in Balb-c nu/nu mice harboring KM12 cells. Taletrectinib free base (3 - 100 mg/kg; p.o.; once daily for 4 days) induces rapid tumor regression in wild-type (WT) and G2032R mutant Ba/F3-carrying mice without severe weight loss.[1]

Solubility Information

Solubility	DMSO: 150 mg/mL (369.94 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.4663 mL	12.3314 mL	24.6627 mL
5 mM	0.4933 mL	2.4663 mL	4.9325 mL
10 mM	0.2466 mL	1.2331 mL	2.4663 mL
50 mM	0.0493 mL	0.2466 mL	0.4933 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

Katayama R, et al. The new-generation selective ROS1/NTRK inhibitor DS-6051b overcomes crizotinib resistant ROS1-G2032R mutation in preclinical models. Nat Commun. 2019;10(1):3604.
Fujiwara Y, et al. Safety and pharmacokinetics of DS-6051b in Japanese patients with non-small cell lung cancer harboring ROS1 fusions: a phase I study. Oncotarget. 2018;9(34):23729-23737.