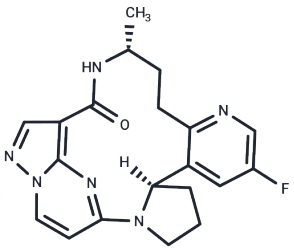
Data Sheet (Cat.No.T7435)

TargetMol

Selitrectinib

Chemical Properties



CAS No. : 2097002-61-2

Formula: C20H21FN6O

Molecular Weight: 380.42

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	Selitrectinib (LOXO-195) is a potent and selective inhibitor of the receptor tyrosine kinases(TRK)(TrkA and TrkC with IC50s of 0.6 and <2.5 nM, respectively).
Targets(IC50)	Trk receptor
In vivo	Selitrectinib (≥30 mg/kg) reduces tumor growth in TrkA-dependent KM12, as well as NIH 3T3 ΔTrkA, ΔTrkA + TrkAG595R, and ΔTrkA + TrkAG667C mouse xenograft models.
Animal Research	Each cell line (2-5×10e6 cells) was injected subcutaneously into female nu/nu NCr mice age 7-9 weeks and allowed to grow to ~100-200 mm3 (efficacy) or ~ 500mm3 (PK-PD) prior to randomization by tumor size and treatment with each inhibitor by oral gavage.? For PK-PD analysis, animals were dosed for 3 days, followed by euthanasia, excision of tumors and collection of plasma.?Phospho-TRK levels in tumor lysates were determined by ELISA assay, while plasma inhibitor levels were determined by LC-MS/MS.?For efficacy analysis, animals were dosed by oral gavage, and body weight and tumor size were monitored at regular intervals.

Solubility Information

Solubility	DMSO: 65 mg/mL (170.86 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 (5.26 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	2.6287 mL	13.1434 mL	26.2867 mL
5 mM	0.5257 mL	2.6287 mL	5.2573 mL
10 mM	0.2629 mL	1.3143 mL	2.6287 mL
50 mM	0.0526 mL	0.2629 mL	0.5257 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

Xiang S, et al. Selective type II TRK inhibitors overcome xDFG mutation mediated acquired resistance to the second-generation inhibitors selitrectinib and repotrectinib. Acta Pharm Sin B. 2024 Feb;14(2):517-532.
Qin Q, Fu Q, Wang X, et al.Design, synthesis and biological evaluation of novel indolin-2-one derivatives as potent second-generation TRKs inhibitors.European Journal of Medicinal Chemistry.2023: 115291.
Qin Q, Guo Z, Lu S, et al.Discovery of novel 3-(1H-pyrazol-4-yl)-1H-indazole derivatives as potent type II TRK inhibitors against acquired resistance.European Journal of Medicinal Chemistry.2023: 115953.
Keddy C, et al. Mechanisms of targeted therapy resistance in a pediatric glioma driven by ETV6-NTRK3 fusion. Cold Spring Harb Mol Case Stud. 2021 Oct 19;7(5):a006109.
Drilon A, et al. A Next-Generation TRK Kinase Inhibitor Overcomes Acquired Resistance to Prior TRK Kinase Inhibition in Patients with TRK Fusion-Positive Solid Tumors. Cancer Discov. 2017 Sep;7(9):963-972.
Qin Q, Lu S, Guo Z, et al.Discovery of novel indazole derivatives as second-generation TRK inhibitors.European Journal of Medicinal Chemistry.2024: 116640.