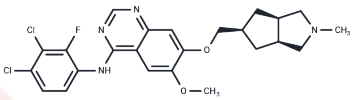
Data Sheet (Cat.No.TQ0166)

TargetMol

Tesevatinib

Chemical Properties



CAS No. : 781613-23-8

Formula: C24H25Cl2FN4O2

Molecular Weight: 491.39

Storage: Store at low temperature
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	Tesevatinib (XL-647) is an oral, multi-targeted tyrosine kinase inhibitor with IC50 values of 0.3, 16, 1.5, 8.7, and 1.4 nM for EGFR, ErbB2, KDR, Flt4, and EphB4.
Targets(IC50)	EGFR,FLT,Ephrin Receptor,Src,VEGFR
In vitro	Tesevatinib (XL-647) potently inhibits the EGF/ErbB2, VEGF, and ephrin RTK families with IC50 values of 0.3, 16, 1.5, 8.7, and 1.4 nM for EGFR, ErbB2, KDR, and EphB4. [1]
In vivo	**METHODS**: To study the in vivo effects of Tesevatinib (XL-647) on T790M mutant EGFR, H1975 human tumor xenografts were established in female severe combined immunodeficient mice and administered Tesevatinib (XL-647) orally once daily (doses: 10, 30 and 100 mg/kg, 14 days) **RESULTS** Tesevatinib (XL-647) significantly inhibited tumor growth in a dose-dependent manner, with tumor growth inhibition rates of 33%, 66% and 92% respectively.[1] **METHODS**: Tesevatinib (XL-647) (7.5, 15 mg/kg, ip, daily) was treated in the well-characterized bpk mouse model of ARPKD, and efficacy and toxicity were evaluated in neonatal mice during postnatal development. **RESULTS** In vivo pharmacological inhibition of multiple kinase cascades by tesevatinib (XL-647) reduced phosphorylation of key mediators of cystogenesis: EGFR, ErbB2, c-Src, and KDR; decreased kinase activity resulted in significant reductions in renal and biliary disease in both the bpk and PCK models of ARPKD. Disease amelioration by tesevatinib (XL-647) was not associated with any overt toxicity. [2]
Cell Research	Growth inhibition of H1975 and A431 cells by increasing concentrations of Tesevatinib is determined by seeding 5000 cells per well in 96-well plates. The following day, cells are washed once with low-serum RPMI 1640 (0.1% fetal bovine serum, 1% nonessential amino acids, and 1% penicillin/streptomycin), after which 90 μL of the low-serum RPMI 1640 is added. Tesevatinib is diluted to 10 times the test concentrations and 10 μL are added to triplicate wells for a 72-h incubation. Cell viability is determined.
Animal Research	Tumor-bearing mice are given either Tesevatinib, erlotinib, or gefitinib at 100 mg/kg and tumors are harvested 1 to 72 h later. Half an hour before the respective time point, EGF (50 μg/mouse) is given via i.v. bolus injection with tumors dissected 30 min later and tumor extracts are prepared by homogenization in 10 volumes of ice-cold lysis buffer. Lysates are clarified by centrifugation and EGFR tyrosine phosphorylation levels are determined by ELISA.

Solubility Information

Solubility	DMSO: 45 mg/mL (91.58 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 (4.07 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	2.035 mL	10.1752 mL	20.3504 mL
5 mM	0.407 mL	2.035 mL	4.0701 mL
10 mM	0.2035 mL	1.0175 mL	2.035 mL
50 mM	0.0407 mL	0.2035 mL	0.407 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

Gendreau SB, et al. Inhibition of the T790M gatekeeper mutant of the epidermal growth factor receptor by EXEL-7647. Clin Cancer Res. 2007 Jun 15;13(12):3713-23.
Sweeney WE, et al. Tesevatinib ameliorates progression of polycystic kidney disease in rodent models of autosomal recessive polycystic kidney disease. World J Nephrol. 2017 Jul 6;6(4):188-200.