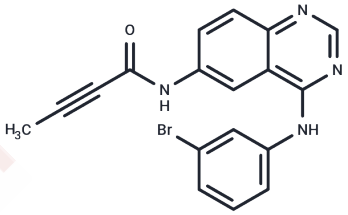
Data Sheet (Cat.No.T2245)

TargetMol

CL-387785

Chemical Properties



CAS No. : 194423-06-8

Formula: C18H13BrN4O

Molecular Weight: 381.23

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	CL-387785 (WAY-EKI 785)(EKI785; WAY-EKI 785) is an irreversible inhibitor of EGFR(IC50: 370+/-120 pM); is able to overcome resistance caused by the T790M mutation on a functional level.
Targets(IC50)	EGFR
In vitro	CL-387785 demonstrates significant inhibitory effects on the growth of HCT-116-induced xenograft tumors at a dose of 50 mg/kg. In nude mice expressing EGF-R, CL-387785 administered orally at 80 mg/kg/day effectively suppresses tumor growth. In a mouse model of autosomal recessive polycystic kidney disease, treatment with CL-387785 at 90 mg/kg intraperitoneally in Balb/c-bpk/bpk (BPK) mice significantly reduces cystic lesions in collecting ducts, improves kidney function, decreases abnormalities in bile duct epithelial cells, and extends lifespan. At 25 mg/kg, CL-387785 can reduce the growth of HCA-7-induced xenograft tumors, and a dose of 100 mg/kg completely inhibits tumor growth.
In vivo	CL-387785 effectively blocks EGF-mediated receptor autophosphorylation in cells (IC50: 5 nM). It principally acts as a cellular inhibitor, suppressing cell proliferation in cell lines overexpressing EGF-R or c-erbB-2 (IC50: 31 nM).
Kinase Assay	Liquid scintillation: Stock solutions of 500 μM CL-387785 (prepared in 100% DMSO) are diluted to the desired concentration with 30 mM HEPES, pH 7.4. Ten microliters of CL-387785 at various concentrations are incubated with 3 μL of recombinant enzyme (1:120 dilution in 100 mM HEPES, pH 7.4) on ice for 10 min. Then, 5 μL peptide (400 μM final concentration of RR-SRC composed of Arg-Arg-Leu-Ile-Glu-Asp-Ala-Glu-Tyr-Ala-Ala-Arg-Gly), 10 μL of 4× reaction buffer containing 50 mM HEPES, pH 7.4, 80 μM ATP, 40 mM MnCl2, and 200 μM sodium orthovanadate. 0.30 μL [33P]ATP (>2500 Ci/mmol), and 12 μL Water are added. After incubation for 90 min at room temperature, the entire volume is spotted onto precut P81 filter papers. The filter discs are washed two times with 0.5% phosphoric acid, and radioactivity is measured using a liquid scintillation counter. Under these conditions, the specific activity of EGF-R kinase is approximately 0.50 pmol/mg/min.
Cell Research	MTS assays are performed with the CellTiter 96@ AQueous One solution proliferation kit. A total of 10,000 cells per well in 96-well ?at-bottomed plates are incubated with various concentrations of inhibitors for 48 h. The IC50 is determined from dose-response curves using XL?t4.(Only for Reference)

Solubility Information

Solubility	DMSO: 60 mg/mL (157.39 mM),Sonication is recommended. Ethanol: < 1 mg/mL (insoluble or slightly soluble), H2O: < 1 mg/mL (insoluble or slightly soluble), (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.6231 mL	13.1154 mL	26.2309 mL
5 mM	0.5246 mL	2.6231 mL	5.2462 mL
10 mM	0.2623 mL	1.3115 mL	2.6231 mL
50 mM	0.0525 mL	0.2623 mL	0.5246 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

Discafani CM, et al. Biochem Pharmacol. 1999, 57(8), 917-925.
William E, et al. Kidney International. 2000, 57(1), 33-40.
Hama T, et al. Clin Exp Metastasis. 2012, 29(1), 19-25.
Kancha RK, et al. PloS ONE. 2011, 6(10), e26760.
Roberts RB, et al. Proc Natl Acad Sci. 2002, 99(3), 1521-1526.