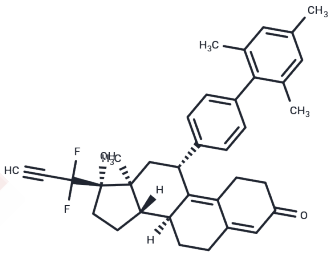
Data Sheet (Cat.No.T11146)

TargetMol

EC359

Chemical Properties



CAS No. : 2012591-09-0

Formula: C36H38F2O2

Molecular Weight: 540.68

Appearance: no data available

Storage: store at low temperature
Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Biological Description

Description	EC359 is a potent and selective inhibitor of leukemia inhibitory factor receptor (LIFR), a potent inhibitor with anticancer activity, blocks LIF/LIFR interaction, and can be used in the study of leukemia and endometrial cancer.
Targets(IC50)	Apoptosis
In vitro	EC359 treatment (0-100 nM) for 3 days in BT-549, SUM-159, MDA-MB-231, MDA-MB-468, and HCC1806 cells leads to a dose-dependent reduction in cell viability[1]. In MDA-MB-231 and BT-549 cells, treatment with EC359 at concentrations of 20 nM and 25 nM for 72 hours significantly increases caspase-3/7 activity and the proportion of Annexin V-positive cells. EC359 exhibits noteworthy inhibitory activity on invasion and promotes apoptosis in triple-negative breast cancer (TNBC) cells[1].Treatment with EC359 at 100 nM for 12 hours in BT549 cells significantly decreases the expression of several known STAT3 target genes, including STAT1, TGFB1, JUNB, MCL-1, etc[1].In MDA-MB-231 and BT-549 cells, EC359 treatment at 100 nM for 1 hour substantially reduces STAT3 activation induced by LIF, OSM, and CNTF. Additionally, EC359 treatment leads to a significant decrease in the phosphorylation of AKT, mTOR, S6, and ERK1/2. Furthermore, EC359 treatment enhances the phosphorylation of proapoptotic p38MAPK in BT549 cells[1].
In vivo	Subcutaneous injection of EC359 at a dose of 5 mg/kg, administered three days per week for 25 days in female athymic nude mice, significantly reduces tumor progression. Importantly, the body weights of mice in the EC359-treated groups remain unchanged, confirming the low toxicity of EC359[1].

Solubility Information

Solubility	DMSO: 100 mg/mL (184.95 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.8495 mL	9.2476 mL	18.4952 mL
5 mM	0.3699 mL	1.8495 mL	3.699 mL
10 mM	0.185 mL	0.9248 mL	1.8495 mL
50 mM	0.037 mL	0.185 mL	0.3699 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.

Reference

Viswanadhapalli S, et al. EC359: A First-in-Class Small-Molecule Inhibitor for Targeting Oncogenic LIFR Signaling in Triple-Negative Breast Cancer. Mol Cancer Ther. 2019 Aug;18(8):1341-1354.