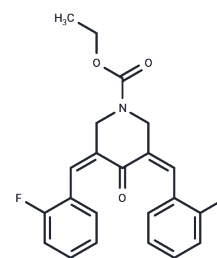


G5-7

Chemical Properties

CAS No. : 939681-36-4
 Formula: C₂₂H₁₉F₂N₃O
 Molecular Weight: 383.39
 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	JAK2 inhibitor G5-7 (JAK2 inhibitor G5-7) is an orally active JAK2 inhibitor, selectively inhibits JAK2-mediated phosphorylation and activation of EGFR (Tyr1068) and STAT3 by binding to JAK2. G5-7 has the potential for glioma study
Targets(IC50)	Apoptosis,JAK
In vitro	G5-7 that selectively inhibited Janus kinase 2 (JAK2)-mediated phosphorylation and activation of EGFR and STAT3 (signal transducer and activator of transcription 3) by binding to JAK2, thereby decreasing the activity of downstream signaling by mTOR (mammalian target of rapamycin) and inducing cell cycle arrest. G5-7 inhibited the proliferation of PTEN-deficient glioblastoma cell lines harboring a constitutively active variant of EGFR (U87MG/EGFRvIII) and human glioblastoma explant neurosphere cultures, but the drug only weakly inhibited the proliferation of either glioblastoma cell lines that were wild type for EGFR and stably transfected with PTEN (U87MG/PTEN) or normal neural progenitor cells and astrocytes. Additionally, G5-7 reduced vascular endothelial growth factor (VEGF) secretion and endothelial cell migration and induced apoptosis in glioblastoma xenografts, thereby suppressing glioblastoma growth in vivo. Furthermore, G5-7 was more potent than EGFR or JAK2 inhibitors that interfere with either ligand or adenosine 5'-triphosphate (ATP) binding at impeding glioblastoma cell proliferation.

Solubility Information

Solubility	DMSO: 40.41 mg/mL (105.4 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+90% Saline: 4.04 mg/mL (10.54 mM),Suspension. <i>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.</i>

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.6083 mL	13.0416 mL	26.0831 mL
5 mM	0.5217 mL	2.6083 mL	5.2166 mL
10 mM	0.2608 mL	1.3042 mL	2.6083 mL
50 mM	0.0522 mL	0.2608 mL	0.5217 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

Kunyan He, et al. Blockade of glioma proliferation through allosteric inhibition of JAK2. *Sci Signal*. 2013 Jul 9;6(283):ra55.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

This product is for Research Use Only · Not for Human or Veterinary or Therapeutic Use

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