

ALK/ROS1-IN-5

Chemical Properties

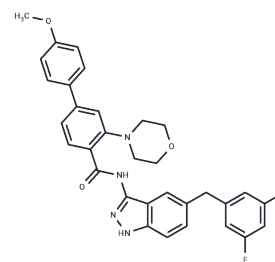
CAS No. :

Formula: C₃₂H₂₈F₂N₄O₃

Molecular Weight: 554.586

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	ALK/ROS1-IN-5 (compound X4) is a selective inhibitor of ALK and ROS1 kinases, with IC ₅₀ values of 0.512 μM for ALK and 0.766 μM for ROS1. It inhibits H2228 cells with an IC ₅₀ of 0.034 μM and induces apoptosis in cancer cells in a dose-dependent manner. Additionally, ALK/ROS1-IN-5 effectively suppresses the expression of p-ALK and p-ERK in cancer cells.
Targets(IC ₅₀)	Apoptosis,ALK,ROS Kinase
In vitro	ALK/ROS1-IN-5 effectively inhibits H2228, H1975, and H460 cell lines when used at concentrations ranging from 0-100 μM over 72 hours [1]. At 10 μM, it demonstrates significant inhibitory activity against tyrosine kinase family members, including EGFR, AKT1, FGFR1, and ERK1 [1]. The compound shows pronounced kinase inhibition for both ALK and ROS1, with inhibition rates of 94.34% and 94.27%, respectively, at the same concentration [1]. In a dose-dependent manner, ALK/ROS1-IN-5 at 1-2 μM over 24 hours suppresses migration and induces apoptosis and cell cycle arrest in H2228 cells [1]. Additionally, at concentrations ranging from 0.1 to 0.5 μM over 24 hours, it reduces the phosphorylation of ALK and ERK in a dose-dependent fashion [1].
In vivo	ALK/ROS1-IN-5, administered orally at doses of 60 or 120 mg/kg daily for 7 days, shows no significant toxicity in mouse blood biochemical profiles [1]. When given at 10 mg/kg daily for 35 days, it demonstrates notable antitumor activity [1]. At doses ranging from 5 to 25 mg/kg daily for 14 days, it minimally affects reticulocyte reduction [1]. Administering 25 to 50 mg/kg daily for 21 days results in a lower tumor growth rate compared to the positive control group [1]. Additionally, ALK/ROS1-IN-5 reduces Ki67, Bcl2, Caspase 3, and PCNA levels in a dose-dependent manner [1].

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.8031 mL	9.0157 mL	18.0313 mL
5 mM	0.3606 mL	1.8031 mL	3.6063 mL
10 mM	0.1803 mL	0.9016 mL	1.8031 mL
50 mM	0.0361 mL	0.1803 mL	0.3606 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.

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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