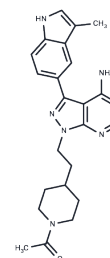


ALK5-IN-79

Chemical Properties

CAS No. : 2725056-38-0
 Formula: C₂₃H₂₇N₇O
 Molecular Weight: 417.51
 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	ALK5-IN-79 (compound 57), an ALK inhibitor, exhibits anticancer activity by inhibiting the TGF- β 1/SMAD signaling pathway. It effectively reduces the production of extracellular matrix (ECM) and collagen deposition. Moreover, ALK5-IN-79 demonstrates satisfactory pharmacokinetic (PK) properties and favorable in vivo tolerance.
Targets(IC50)	ALK
In vitro	ALK5-IN-79, at a concentration of 1000 nM for 2 hours, exhibits moderate to strong inhibitory activity against ALK5, SRC, LCK, BRAF (V600E), ET, PDGFR α , EGFR, and KDR, with inhibition rates exceeding 20% [1]. At varying concentrations (0, 0.125, 0.25, 0.5, 1.0, and 2.0 μ M) over a 1-hour period, ALK5-IN-79 inhibits the phosphorylation of smad3 in a dose-dependent manner [1]. Western Blot Analysis [1], using abnormally proliferating cancer-associated fibroblasts at concentrations ranging from 0 to 2.0 μ M and a 1-hour incubation, demonstrates that ALK5-IN-79 blocks the upregulation of mRNA and protein levels of collagen I (Col1) and α -SMA, target genes of smad3, induced by TGF- β 1. The compound also leads to a reduction in the secretion of Col1.
In vivo	ALK5-IN-79, administered at 300 mg/kg via intraperitoneal injection daily for 7 days, did not lead to significant weight loss in mice, indicating safety for in vivo studies [1]. In the Pan02 syngeneic model, ALK5-IN-79 demonstrated tumor growth inhibition rates of 61.9% and 80.5% with doses of 10 mg/kg and 50 mg/kg, respectively, administered intravenously every other day for 24 days. In the PANC-1 subcutaneous xenograft model, the same dosing regimen resulted in tumor growth inhibition rates of 62.1% and 75.6%. Overall, ALK5-IN-79 effectively suppressed pancreatic cancer tumor growth in a dose-dependent manner [1].

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.3952 mL	11.9758 mL	23.9515 mL
5 mM	0.479 mL	2.3952 mL	4.7903 mL
10 mM	0.2395 mL	1.1976 mL	2.3952 mL
50 mM	0.0479 mL	0.2395 mL	0.479 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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