

SY-LB-57

Chemical Properties

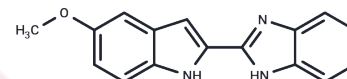
CAS No. : 2253719-35-4

Formula: C₁₆H₁₃N₃O

Molecular Weight: 263.29

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	SY-LB-57 is a highly effective agonist of bone morphogenetic protein (BMP) receptor signaling, suitable for studies of conditions such as bone fractures and pulmonary arterial hypertension [1].
Targets(IC50)	Others, TGF-beta/Smad
In vitro	SY-LB-57 (0.01-1000 µM, 24 h) induces cell proliferation at concentrations below 10 µM, with an IC ₅₀ value of 807.93 µM in C2C12 cells [1]. It increases Smad protein phosphorylation, promotes p-Smad nuclear translocation, activates the PI3K/Akt pathway, and induces cytoplasmic localization of p-Akt at 0.01-10 µM for 15-30 min [1]. Additionally, SY-LB-57 (0.01-10 µM, 24 h) shifts the cell cycle towards the S and G2/M phases [1]. Cell Viability Assay [1]: SY-LB-57 (0.01-1000 µM) increased cell viability in C2C12 cells by 280-50% at concentrations from 0.01 µM to 100 µM compared to control. Western Blot Analysis [1]: SY-LB-57 (0.01-10 µM) significantly increased Smad phosphorylation by 50-257% after 30 min and p-Akt expression by 667-1081% after 15 min. Cell Cycle Analysis [1]: SY-LB-57 (0.01-10 µM) shifted the cell cycle towards proliferation with a decrease in G0/G1 phase cells and an increase in S and G2/M phase cells.

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.7981 mL	18.9905 mL	37.9809 mL
5 mM	0.7596 mL	3.7981 mL	7.5962 mL
10 mM	0.3798 mL	1.899 mL	3.7981 mL
50 mM	0.076 mL	0.3798 mL	0.7596 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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