

LQ23

Chemical Properties

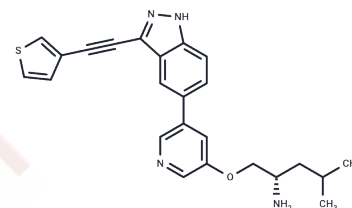
CAS No. : 2997615-62-8

Formula: C₂₄H₂₄N₄O₅

Molecular Weight: 416.54

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	LQ23 is a selective inhibitor of CDC2-like kinase 2 (CLK2) with an IC ₅₀ of 1.4 nM, exhibiting anti-inflammatory activity [1].
Targets(IC ₅₀)	CDK
In vitro	LQ23, when used at concentrations of 10-100 nM, inhibits the phosphorylation of SR proteins in chondrocytes in a dose-dependent manner, consequently modulating gene alternative splicing [1]. It also dose-dependently suppresses CHIR99021-induced Wnt signaling in HEK-293T cells with an IC ₅₀ of 2.9 μM [1]. At a concentration of 30 nM, LQ23 enhances the differentiation of bone marrow mesenchymal stem cells (BMSC) into chondrocytes and prevents cartilage degeneration, which helps improve osteoarthritis [1]. According to a Western blot analysis [1], treatment of chondrocytes with 10-100 nM LQ23 for 1 hour resulted in decreased levels of phosphorylated SRSF4, SRSF5, and SRSF6, as well as reduced β-catenin and c-myc levels.
In vivo	LQ23, administered as a single intra-articular injection at a dosage of 1.5 μg/kg, demonstrated anti-inflammatory properties, cartilage protection, and improved joint function in Sprague-Dawley rat models of osteoarthritis induced by monosodium iodoacetate (MIA) or ACLT-pMMx. Specific improvements observed include enhanced cartilage surface and cellular alignment, reduced synovial membrane thickness, increased space between the femur and tibia, and lowered levels of inflammatory cytokines and degradative enzymes. [1]

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.4007 mL	12.0036 mL	24.0073 mL
5 mM	0.4801 mL	2.4007 mL	4.8015 mL
10 mM	0.2401 mL	1.2004 mL	2.4007 mL
50 mM	0.048 mL	0.2401 mL	0.4801 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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