

CPD-002

Chemical Properties

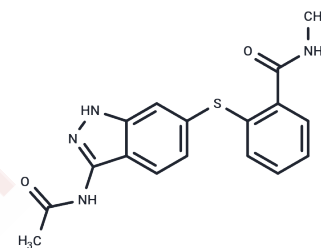
CAS No. : 2617376-08-4

Formula: C17H16N4O2S

Molecular Weight: 340.40

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	CPD-002 is an inhibitor of vascular endothelial growth factor receptor 2 (VEGFR 2) that suppresses angiogenesis by inhibiting the VEGFR2/PI3K/AKT signaling pathway. Additionally, CPD-002 demonstrates anti-inflammatory properties and mitigates rheumatoid arthritis [1].
Targets(IC50)	VEGFR
In vitro	CPD-002 exhibits dose-dependent cytotoxicity on HUVEC and MH7A cells at concentrations ranging from 0-64 μ M over 24-48 hours. It inhibits VEGF-induced migration and invasion of HUVEC cells by suppressing F-actin expression and the chemotactic response to chemokines released from MH7A cells at 0-8 μ M for 24 hours. CPD-002 also demonstrates anti-inflammatory activity, inhibiting synovial angiogenesis by reducing the expression of inflammatory mediators such as TNF- α , IL-1 β , IL-6, IL-8, MMP2, and MMP9 at concentrations of 0-8 μ M. Additionally, at the same concentration range over 9 days, CPD-002 suppresses tube and sprout formation in ex vivo rat aortic ring assays. [1] Cell Viability Assay [1] Cell Line: HUVECs and MH7A Concentration: 0-64 μ M Incubation Time: 24-48 h Result: Inhibited cell viability in a dose-dependent manner. Cell Migration Assay [1] Cell Line: HUVECs Concentration: 0-8 μ M Incubation Time: 24 h Result: Inhibited HUVECs migration in a dose-dependent manner.
In vivo	CPD-002 (15-60 mg/kg, administered via intraperitoneal injection once daily for 14 days) exhibits anti-arthritis and anti-angiogenesis activities in Sprague Dawley rats with adjuvant-induced arthritis (AIA) [1]. This treatment resulted in reduced paw swelling, decreased joint damage, and diminished synovial angiogenesis.

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.9377 mL	14.6886 mL	29.3772 mL
5 mM	0.5875 mL	2.9377 mL	5.8754 mL
10 mM	0.2938 mL	1.4689 mL	2.9377 mL
50 mM	0.0588 mL	0.2938 mL	0.5875 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

Tel:781-999-4286 E_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481