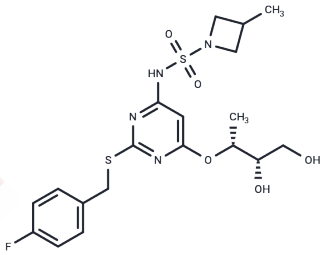
Data Sheet (Cat.No.T38850)

TargetMol

Vimnerixin

Chemical Properties



CAS No. : 1418112-77-2

Formula: C19H25FN4O5S2

Molecular Weight: 472.55

Storage: Store at low temperature
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	Vimnerixin (AZD4721) is an orally administered CXCR2 antagonist for inflammation studies.
Targets(IC50)	CXCR
In vitro	Vimnerixin (RIST4721) inhibited KC-stimulated chemotaxis in a dose-dependent manner. Vimnerixin at 10 nM and 100 nM significantly suppressed chemotaxis, while the inhibitory effect at 1 nM was not evident. Vimnerixin at 1 μM completely blocked KC-induced chemotaxis.
In vivo	In preclinical studies, Vimnerixin underwent systematic pharmacokinetic evaluation in male Sprague-Dawley (SD) rats and beagle dogs via intravenous injection (1 mg/kg) and oral administration, with bile duct cannulation (BDC) experiments conducted to assess its excretion pathways. The results demonstrated that Vimnerixin exhibited low clearance rates (2.4 ml/min/kg in rats, 0.5 ml/min/kg in dogs), low volume of distribution (0.15-0.19 L/kg), and prolonged half-life (3.7 hours for intravenous administration in dogs, extending to 8.4 hours for oral administration). The plasma concentration-time curves were highly consistent between bile-duct-cannulated and non-cannulated groups, indicating minimal influence from enterohepatic circulation.

Solubility Information

Solubility	DMSO: 80 mg/mL (169.29 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.1162 mL	10.5809 mL	21.1618 mL
5 mM	0.4232 mL	2.1162 mL	4.2324 mL
10 mM	0.2116 mL	1.0581 mL	2.1162 mL
50 mM	0.0423 mL	0.2116 mL	0.4232 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.

Reference

Szymczak K, et al. CXCR2 Antagonist RIST4721 Acts as a Potent Chemotaxis Inhibitor of Mature Neutrophils Derived from Ex Vivo-Cultured Mouse Bone Marrow. Biomedicines. 2023 Feb 7;11(2):479.
Gardiner P, et al. Plasma Protein Binding as an Optimizable Parameter for Acidic Drugs. Drug Metab Dispos. 2019; 47(8):865-873.