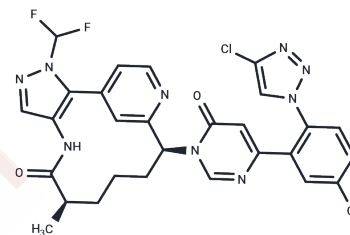


Milvexian

Chemical Properties

CAS No. :	1802425-99-5
Formula:	C ₂₈ H ₂₃ Cl ₂ F ₂ N ₉ O ₂
Molecular Weight:	626.45
Storage:	Keep away from direct sunlight Powder: -20°C for 3 years In solvent: -80°C for 1 year <small>Actual storage temperature shall be subject to the COA.</small>



Biological Description

Description	Milvexian (BMS-986177/JNJ-70033093) is an orally bioavailable, small-molecule, reversible, and direct antagonist of Factor XIa (FXIa). It exhibits potent inhibitory activity across species, with K_i values of 0.11 nM for human, 0.38 nM for rabbit, and 0.64 nM for dog. By targeting FXIa, Milvexian selectively inhibits the intrinsic pathway of the coagulation cascade. It demonstrates robust antithrombotic efficacy in various in vitro and in vivo models while maintaining a favorable safety profile regarding bleeding risk. It is a critical tool for investigating novel anticoagulant strategies in thrombosis and cardiovascular research.
Targets(IC50)	Factor Xa
In vitro	Milvexian (~10 μ M) prolongs aPTT in human plasma, confirming selective blockade of the intrinsic coagulation pathway. It does not affect platelet aggregation induced by ADP or collagen, indicating that its antithrombotic effect is coagulation-specific, offering a mechanistic advantage in reducing bleeding risk [1].
In vivo	In a rabbit thrombosis model, Milvexian dose-dependently maintained carotid blood flow (32-76%) and reduced thrombus weight (15-70%) following i.v. administration. Orally dosed at 20 mg/kg, it achieved a plasma concentration of 2000 nM at 1 h, demonstrating favorable PK [1][2].

Solubility Information

Solubility	DMSO: 80 mg/mL (127.7 mM) (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.5963 mL	7.9815 mL	15.963 mL
5 mM	0.3193 mL	1.5963 mL	3.1926 mL
10 mM	0.1596 mL	0.7981 mL	1.5963 mL
50 mM	0.0319 mL	0.1596 mL	0.3193 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

Pancras C. Wong, et al. Milvexian, an orally bioavailable, small-molecule, reversible, direct inhibitor of factor XIa: In vitro studies and in vivo evaluation in experimental thrombosis in rabbits.

Xinkang Wang, et al. Antithrombotic Effects of the Novel Small-Molecule Factor XIa Inhibitor Milvexian in a Rabbit Arteriovenous Shunt Model of Venous Thrombosis. TH Open. 2023 Apr; 7(2): e97-e104.

Wong P, et al. Small-Molecule Factor XIa Inhibitor, BMS-986177/JNJ-70033093, Prevents and Treats Arterial Thrombosis in Rabbits at Doses that Preserve Hemostasis [abstract]. Res Pract Thromb Haemost. 2020; 4 (Suppl 1).

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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