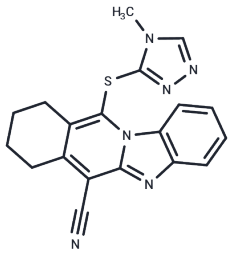
Data Sheet (Cat.No.T212821)

M6766

Chemical Properties



CAS No. : 696628-90-7

Formula: C19H16N6S

Molecular Weight: 360.44

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	M6766 is a selective and potent inhibitor of endoplasmic reticulum oxidoreductase 1α (ERO1α), exhibiting an IC50 of 1.4 uM and a KD of 1.1 uM. It also inhibits ERO1β with an IC50 of 7.2 uM. M6766 exerts its inhibitory effect by binding to the flavin adenine dinucleotide (FAD)-binding pocket of ERO1α. Functionally, M6766 suppresses granule secretion, αIIbβ3 integrin activation, Ca2+ mobilization, and platelet aggregation. It serves as a significant chemical probe for investigating the molecular pathways of arterial thrombosis and neurological disorders, such as ischemic stroke.
Targets(IC50)	Reactive Oxygen Species
In vitro	M6766 selectively inhibits ERO1α (FAD-enhanced activity) without affecting MAO-A or PDI. In platelets (1–5 μM), it suppresses P-selectin exposure, αIIbβ3 activation, aggregation, and ATP secretion, while inducing ROS, annexin V binding, and disrupting ERO1α-STIM1-mediated Ca^{2+} signaling [1].
In vivo	M6766 (0.3 μg/g, i.v.) prolongs occlusion time in $FeCl_3$-induced arterial thrombosis, reduces brain injury in ischemic stroke models, and does not prolong bleeding time [1].

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.7744 mL	13.8719 mL	27.7439 mL
5 mM	0.5549 mL	2.7744 mL	5.5488 mL
10 mM	0.2774 mL	1.3872 mL	2.7744 mL
50 mM	0.0555 mL	0.2774 mL	0.5549 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

Wang J, et al. Selective inhibition of ERO1α with M6766, a novel small-molecule inhibitor, prevents arterial thrombosis and ischemic stroke in mice. Mol Ther. 2025 Jul 23:S1525-0016(25)00569-6.

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