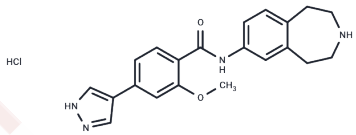
Data Sheet (Cat.No.T11725)

TargetMol

JNJ-47117096 hydrochloride

Chemical Properties



CAS No. :	1610536-69-0
Formula:	C21H23ClN4O2
Molecular Weight:	398.89
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	JNJ-47117096 hydrochloride is a potent and selective MELK inhibitor with an IC50 of 23 nM and also effectively inhibits Flt3 with an IC50 of 18 nM.
Targets(IC50)	Others,FLT,MELK
In vitro	JNJ-47117096 demonstrates selectivity in its mechanism, showing no inhibitory effects on Ba/F3 cell proliferation transfected with FGFR1, FGFR3, or KDR, irrespective of IL-3 presence. At a concentration of 10 μM (MELK-T1), it notably slows MCF-7 cell progression through S-phase and targets MELK to induce replication forks stalling and DNA double-strand breaks (DSBs), subsequently activating the ATM-mediated DNA damage response (DDR). Furthermore, at 3 and 10 μM, it initiates growth arrest and a senescence phenotype, significantly increasing p53 phosphorylation, sustained p21 up-regulation, and down-regulation of FOXM1 target genes. As a MELK inhibitor, JNJ-47117096 hydrochloride exhibits potent and selective inhibition with an IC50 of 23 nM, also effectively inhibiting Flt3 (IC50 of 18 nM) and moderately affecting CAMKIIδ, Mnk2, CAMKIIγ, and MLCK (IC50s: 810 nM, 760 nM, 1000 nM, 1000 nM). Specifically, JNJ-47117096 (MELK-T1) suppresses Flt3-driven Ba/F3 cell line proliferation with an IC50 of 1.5 μM in the absence of IL-3, showing no inhibitory activity when IL-3 is present.

Solubility Information

Solubility	DMSO: 250 mg/mL (626.74 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.507 mL	12.5348 mL	25.0696 mL
5 mM	0.5014 mL	2.507 mL	5.0139 mL
10 mM	0.2507 mL	1.2535 mL	2.507 mL
50 mM	0.0501 mL	0.2507 mL	0.5014 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

Johnson CN, et al. Fragment-based discovery of type I inhibitors of maternal embryonic leucine zipper kinase. ACS Med Chem Lett. 2014 May 23;6(1):25-30.
Beke L, et al. MELK-T1, a small-molecule inhibitor of protein kinase MELK, decreases DNA-damage tolerance in proliferating cancer cells. Biosci Rep. 2015 Oct 2;35(6). pii: e00267.