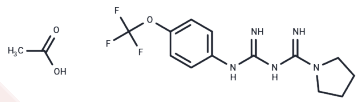
Data Sheet (Cat.No.T36420)

TargetMol

IM-156 acetate

Chemical Properties



CAS No. : 2043654-54-0

Formula: C15H20F3N5O3

Molecular Weight: 375.35

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	IM-156 acetate, an activator of NADH dehydrogenase (IC50=2.2 μM) and AMP-activated protein kinase alpha (AMPKα), is an orally available and bioavailable inhibitor of mitochondrial oxidative phosphorylation (OxPhos).IM-156 acetate increases AMPKα activity and inhibits chlorhexadiene-induced peritoneal fibrosis and inhibit tumor growth in rats .
Targets(IC50)	Others
In vitro	IM-156 is an inhibitor of mitochondrial complex I, also known as an activator of NADH dehydrogenase (IC50 = 2.2 μM) and AMP-activated protein kinase α (AMPKα).[1][2]
In vivo	It reduces the oxygen consumption rate (OCR; IC50 = 3.3 μM) and decreases mitochondrial ATP production in Eμ-Myc mouse lymphoma cells.1 IM-156 (10, 30, and 50 μM) increases AMPKα activity in primary rat peritoneal mesothelial cells and protects against chlorhexidine-induced peritoneal fibrosis in rats when administered at a dose of 1 mg/kg.2 It reduces tumor growth in an AT-84 murine oral cancer model and decreases age-related decline in novel object recognition, spatial working, and contextual memory in mice.[3][4]

Solubility Information

Solubility	DMSO: 1 mg/mL (2.66 mM),Sonication is recommended. DMF: 1 mg/mL (2.66 mM),Sonication is recommended. Ethanol: 1 mg/mL (2.66 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.6642 mL	13.3209 mL	26.6418 mL
5 mM	0.5328 mL	2.6642 mL	5.3284 mL
10 mM	0.2664 mL	1.3321 mL	2.6642 mL
50 mM	0.0533 mL	0.2664 mL	0.5328 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

Izreig S, et al. Repression of LKB1 by miR-1792 Sensitizes MYC-Dependent Lymphoma to Biguanide Treatment. Cell Rep Med. 2020;1(2):100014.
Ju KD, et al. HL156A, a novel AMP-activated protein kinase activator, is protective against peritoneal fibrosis in an in vivo and in vitro model of peritoneal fibrosis. Am J Physiol Renal Physiol. 2016;310(5):342-350.
Lam TG, et al. New metformin derivative HL156A prevents oral cancer progression by inhibiting the insulin-like growth factor/AKT/mammalian target of rapamycin pathways. Cancer Sci. 2018;109(3):699-709.
Bang E, et al. The Improving Effect of HL271, a Chemical Derivative of Metformin, a Popular Drug for Type II Diabetes Mellitus, on Aging-induced Cognitive Decline. Exp Neurobiol. 2018;27(1):45-56.