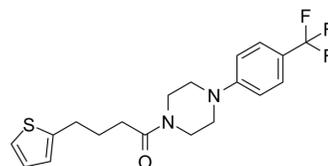


NADH-IN-1

Cat. No.:	HY-146036												
CAS No.:	1432445-15-2												
Molecular Formula:	C ₁₉ H ₂₁ F ₃ N ₂ OS												
Molecular Weight:	382.44												
Target:	Endogenous Metabolite												
Pathway:	Metabolic Enzyme/Protease												
Storage:	<table border="0"> <tr> <td>Powder</td> <td>-20°C</td> <td>3 years</td> </tr> <tr> <td></td> <td>4°C</td> <td>2 years</td> </tr> <tr> <td>In solvent</td> <td>-80°C</td> <td>6 months</td> </tr> <tr> <td></td> <td>-20°C</td> <td>1 month</td> </tr> </table>	Powder	-20°C	3 years		4°C	2 years	In solvent	-80°C	6 months		-20°C	1 month
Powder	-20°C	3 years											
	4°C	2 years											
In solvent	-80°C	6 months											
	-20°C	1 month											



SOLVENT & SOLUBILITY

In Vitro	DMSO : 200 mg/mL (522.96 mM; Need ultrasonic)																					
	<table border="1"> <thead> <tr> <th rowspan="2">Solvent</th> <th rowspan="2">Mass</th> <th colspan="3">Concentration</th> </tr> <tr> <th>1 mg</th> <th>5 mg</th> <th>10 mg</th> </tr> </thead> <tbody> <tr> <td rowspan="3">Preparing Stock Solutions</td> <td>1 mM</td> <td>2.6148 mL</td> <td>13.0739 mL</td> <td>26.1479 mL</td> </tr> <tr> <td>5 mM</td> <td>0.5230 mL</td> <td>2.6148 mL</td> <td>5.2296 mL</td> </tr> <tr> <td>10 mM</td> <td>0.2615 mL</td> <td>1.3074 mL</td> <td>2.6148 mL</td> </tr> </tbody> </table>	Solvent	Mass	Concentration			1 mg	5 mg	10 mg	Preparing Stock Solutions	1 mM	2.6148 mL	13.0739 mL	26.1479 mL	5 mM	0.5230 mL	2.6148 mL	5.2296 mL	10 mM	0.2615 mL	1.3074 mL	2.6148 mL
Solvent	Mass			Concentration																		
		1 mg	5 mg	10 mg																		
Preparing Stock Solutions	1 mM	2.6148 mL	13.0739 mL	26.1479 mL																		
	5 mM	0.5230 mL	2.6148 mL	5.2296 mL																		
	10 mM	0.2615 mL	1.3074 mL	2.6148 mL																		
	Please refer to the solubility information to select the appropriate solvent.																					
In Vivo	1. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: 5 mg/mL (13.07 mM); Clear solution; Need ultrasonic																					

BIOLOGICAL ACTIVITY

Description	NADH-IN-1 has NADH:ubiquinone oxidoreductase inhibitory activity with an IC ₅₀ value of 27 μM. NADH-IN-1 can effectively stimulate glucose uptake in vitro. NADH-IN-1 is readily metabolised by the liver. NADH-IN-1 can be used for researching diabetes ^[1] .
IC₅₀ & Target	IC ₅₀ : 27 μM (NADH:ubiquinone oxidoreductase) ^[1]
In Vivo	NADH-IN-1 (1 μM) exhibits a short half-life and fast intrinsic clearance indicating that it is readily metabolised by the liver in vivo; shows no adverse effects on primary rat hepatocytes, and does not inhibit the hERG channel ^[1] . NADH-IN-1 (10 mg/kg; IV or PO; single dosage) produces no observable toxic effects at 10 mg/kg by IV or PO; exhibits a short half-life and high plasma clearance; exhibits high mouse and human serum protein binding, as well as moderate bioavailability ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Male C57BL/6 mice ^[1]
Dosage:	10 mg/kg
Administration:	IV or PO; single dosage (Pharmacokinetics Analysis)
Result:	Produced no observable toxic effects at 10 mg/kg by IV or PO; exhibited a short half-life of 0.45 h and high plasma clearance; exhibited high mouse and human serum protein binding, as well as moderate bioavailability (21.4%).

REFERENCES

[1]. Devine R, et al. Design, synthesis, and biological evaluation of aryl piperazines with potential as antidiabetic agents via the stimulation of glucose uptake and inhibition of NADH:ubiquinone oxidoreductase. *Eur J Med Chem.* 2020;202:112416.

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA