

JBSNF-000028 TFA

Chemical Properties

CAS No. :

Formula: C₁₃H₁₄F₃N₃O₂

Molecular Weight: 301.26

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	JBSNF-000028 TFA, a nicotinamide N-methyltransferase (NNMT) inhibitor, exhibits oral activity with inhibitory concentration 50 (IC ₅₀) values of 0.033 μM, 0.19 μM, and 0.21 μM for human NNMT (hNNMT), monkey NNMT (mkNNMT), and mouse NNMT (mNNMT) respectively. It is applicable in metabolic disorder research [1].
Targets(IC ₅₀)	Others
In vitro	JBSNF-000028 TFA, after 24 hours of exposure, effectively suppresses NNMT activity, exhibiting an EC ₅₀ value of 2.5 μM in U2OS cells [1]. When tested at concentrations ranging from 10-100 μM for 72 hours, JBSNF-000028 TFA demonstrates no cytotoxic effects on HepG2 cells [1]. The compound specifically interacts with the nicotinamide binding site, inserting itself beneath a hairpin structure and forming stacking interactions between Tyr-204 (from the Hairpin) and Leu-164 (from the central domain) [1]. Additionally, JBSNF-000028 TFA shows inactivity across a comprehensive spectrum of metabolic and safety-related targets [1].
In vivo	JBSNF-000028 TFA, administered orally at a dose of 50 mg/kg twice daily, enhances glucose and lipid metabolism over 27 days in mice with diet-induced obesity (DIO) [1], and similarly improves glucose tolerance in NNMT knockout mice with DIO when given for 4 weeks [1].

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.3194 mL	16.597 mL	33.1939 mL
5 mM	0.6639 mL	3.3194 mL	6.6388 mL
10 mM	0.3319 mL	1.6597 mL	3.3194 mL
50 mM	0.0664 mL	0.3319 mL	0.6639 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.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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