

Enpp-1-IN-11

Chemical Properties

CAS No. :

Formula: C15H15N5O3S

Molecular Weight: 345.38

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	Enpp-1-IN-11 (compound 23) is a highly potent inhibitor of Ecto-nucleotide pyrophosphatase/phosphodiesterases 1 (ENPP1), with a K_i value of 45 nM. It demonstrates excellent stability in human and mouse plasma and exhibits low clearance in both human and mouse liver microsomes, holding promise for anticancer research [1].
Targets(IC50)	Others,PDE
In vivo	Enpp-1-IN-11 exhibits low metabolic clearance in both human and mouse liver microsomes, alongside significant plasma stability in human and mouse plasma [1]. In a study focused on its pharmacokinetic properties in female BALB/c mice [1], Enpp-1-IN-11 demonstrated when administered orally (PO) at 10 mg/kg and intravenously (IV) at 1 mg/kg, the drug reached peak plasma concentrations (C_{max}) of 33.10 ng/mL and 1600.20 ng/mL, respectively, with time to peak (T_{max}) observed at 1.2 hours (PO) and significantly quicker at 0.08 hours (IV). Initial concentrations (C_0) were notably high at 4546.51 ng/mL. The area under the curve (AUC_{last} and AUC_{inf}) also varied significantly between the two administration routes, suggesting differences in exposure, with AUC_{inf} standing at 31.78 ng/mL·h (PO) and 415.55 ng/mL·h (IV). The fraction of drug extrapolated beyond the last measured time point (AUC_{extrap}) was minor, indicating thorough sampling. Its half-life ($t_{1/2}$) and mean residence time (MRT_{last}) were brief, at approximately 0.54 hours and 0.66 hours for PO, and even shorter for IV. Clearance (CL) and steady-state volume of distribution (V_{SS}) were calculated at 40.10 mL/min/kg and 0.22 L/kg, respectively, with bioavailability (F%) being less than 1.

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.8954 mL	14.4768 mL	28.9536 mL
5 mM	0.5791 mL	2.8954 mL	5.7907 mL
10 mM	0.2895 mL	1.4477 mL	2.8954 mL
50 mM	0.0579 mL	0.2895 mL	0.5791 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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Tel:781-999-4286 E_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481