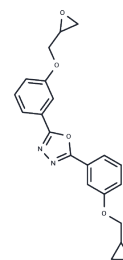


GAPDH-IN-1

Chemical Properties

CAS No. : 252212-58-1
Formula: C₂₀H₁₈N₂O₅
Molecular Weight: 366.37
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	GAPDH-IN-1 (Compound F8) is a GAPDH inhibitor, with an IC ₅₀ value of 39.31 μM for GAPDH enzyme activity. It forms a covalent adduct with the aspartic acid in the active site, displacing the enzyme's cofactor NAD ⁺ , and simultaneously enhances the reactivity of cysteine-reactive probes with the catalytic cysteine.
Targets(IC ₅₀)	Endogenous Metabolite
In vitro	GAPDH-IN-1 exhibits dose-dependent effects, enhancing 40 kDa protein probe labeling within the range of 1.6-50 μM. At a concentration of 50 μM for 4 hours, GAPDH-IN-1 forms a covalent bond with Asp35 in GAPDH, rather than with cysteine residues, which subsequently stimulates a reaction between Cys152 and an iodoacetamide-based (IA) probe. When applied at concentrations of 25-50 μM for 24 hours, the enhancement of probe and GAPDH reaction by GAPDH-IN-1 in HEK293 cells is less significant compared to enhancements observed in cell lysates. Furthermore, GAPDH-IN-1 inactivates GAPDH in HEK293 cell lysates in a concentration-dependent manner, exhibiting an IC ₅₀ of 39.31 μM over 24 hours in the range of 0-100 μM. It also inhibits the viability of HEK293 cells, with an IC ₅₀ of 50.64 μM in the same concentration range. The GAPDH-IN-1-GAPDH adduct can be reduced by the addition of excess NAD ⁺ , as evidenced by the shift in endogenous GAPDH bands observed in silver-stained gels.

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.7295 mL	13.6474 mL	27.2948 mL
5 mM	0.5459 mL	2.7295 mL	5.459 mL
10 mM	0.2729 mL	1.3647 mL	2.7295 mL
50 mM	0.0546 mL	0.2729 mL	0.5459 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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