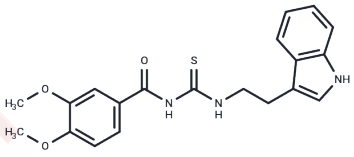
Data Sheet (Cat.No.T212607)

TargetMol

CA-II/TNAP-IN-1

Chemical Properties



CAS No. :

Formula: C20H21N3O3S

Molecular Weight: 383.46

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	CA-II/TNAP-IN-1 is a novel 1,3-disubstituted thiourea derivative that acts as a dual inhibitor of carbonic anhydrase II (CA-II) and tissue-nonspecific alkaline phosphatase (TNAP). The compound is an essential tool for investigating cancer metabolism and enzyme-mediated tumor microenvironment regulation, aiming to enhance anti-tumor efficacy by jointly inhibiting key enzymes involved in pH regulation and mineralization.
Targets(IC50)	Others
In vitro	In biochemical enzyme assays, CA-II/TNAP-IN-1 inhibited human carbonic anhydrase II and alkaline phosphatase with IC50 values of 0.18 and 0.22 uM [1].

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.6078 mL	13.0392 mL	26.0783 mL
5 mM	0.5216 mL	2.6078 mL	5.2157 mL
10 mM	0.2608 mL	1.3039 mL	2.6078 mL
50 mM	0.0522 mL	0.2608 mL	0.5216 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

Bibi M, et al. Computational and experimental investigations of novel 1,3-disubstituted thioureas as the dual inhibitor of b-TNAP and b-CAII enzyme for Cancer treatment. Bioorg Chem. 2025 Dec;167:109199.

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