

W23-1006

Chemical Properties

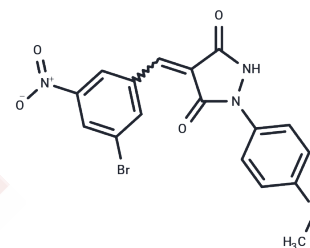
CAS No. : 3035498-92-8

Formula: C₁₇H₁₂BrN₃O₅

Molecular Weight: 418.2

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	W23-1006 is a novel, selective, and cell-active covalent inhibitor of ALKBH5 (an m6A RNA demethylase). It functions by binding to the C200 residue of ALKBH5 with an IC ₅₀ value of 3.848 μM. W23-1006 demonstrates superior selectivity, being approximately 30-fold and 8-fold more potent against ALKBH5 than against FTO and ALKBH3, respectively. By inhibiting ALKBH5 and increasing global m6A abundance, W23-1006 effectively suppresses proliferation, migration, and colonization in triple-negative breast cancer (TNBC) cells.
Targets(IC ₅₀)	ALK
In vitro	In TNBC cells, W23-1006 (5 μM) elevates global m6A modification and dose-dependently (3.16–31.6 μM) inhibits cell viability. It also suppresses migration and colonization by inducing G2/M arrest and apoptosis [1].
In vivo	W23-1006 (25 mg/kg, i.p.) exhibits potent antitumor efficacy in mouse xenograft models. It is rapidly absorbed (T _{max} = 15 min) with a half-life of 0.5–1 h. No overt toxicity is observed up to 250 mg/kg, indicating a favorable safety profile [1].

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.3912 mL	11.956 mL	23.912 mL
5 mM	0.4782 mL	2.3912 mL	4.7824 mL
10 mM	0.2391 mL	1.1956 mL	2.3912 mL
50 mM	0.0478 mL	0.2391 mL	0.4782 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

Yang X, et al. Discovery of a Novel Selective and Cell-Active N6-Methyladenosine RNA Demethylase ALKBH5 Inhibitor. J Med Chem. 2025 Feb 27;68(4):4133-4147.

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