

NCGC00244536

Chemical Properties

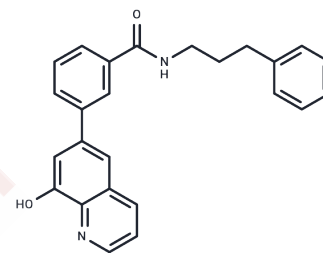
CAS No. : 2003260-55-5

Formula: C₂₅H₂₂N₂O₂

Molecular Weight: 382.45

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	NCGC00244536 (KDM4B Inhibitor B3) is a potent KDM4B inhibitor (IC ₅₀ : 10 nM).
Targets(IC ₅₀)	Histone Demethylase
In vitro	NCGC00244536 significantly suppresses the growth of AR-positive cell lines such as LNCaP and VCaP, demonstrating inhibitory concentration values (IC ₅₀ s) below one micromolar, while effectively eliminating androgen-induced LNCaP cell proliferation. It exhibits strong preference for rapidly proliferating AR-negative PC3 cells with a strikingly low IC ₅₀ of 40 nM, demonstrating greater than 100-fold selectivity compared to immortalized prostate epithelial cell lines PrEC1 and PrEC4. Additionally, NCGC00244536 effectively restricts the expansion of various other cancer cell lines, including breast cancer cell lines MDA-MB2 and MCF-7, showcasing its inhibitory potential across a broad spectrum of cancer types with IC ₅₀ s in the micromolar range.
In vivo	Treatment with NCGC00244536 significantly inhibits tumor growth without causing major toxicity in animals, which appear normal. Tumors treated with NCGC00244536 show a substantial increase in cell apoptosis, necrosis, and fibrosis.
Cell Research	LNCaP cells are treated with 0.1, 0.2, 1, 2.5, 5, 20 μM of NCGC00244536. Cell viability is measured using the MTT assay.
Animal Research	For the xenograft animal model, PC3 cell suspension is injected into 4-6 weeks old severe combined immunodeficient (SCID) mice. When tumors become palpable, animals are randomly grouped for drug treatment. Alzet osmotic minipump containing NCGC00244536 (20 mg/kg) is subcutaneously inserted into each animal, which allowed continuous drug delivery to the tumor site for up to 5 days. Tumor volume is recorded every other days and calculated by using the ellipsoid formula.

Solubility Information

Solubility	DMSO: 100 mg/mL (261.47 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.6147 mL	13.0736 mL	26.1472 mL
5 mM	0.5229 mL	2.6147 mL	5.2294 mL
10 mM	0.2615 mL	1.3074 mL	2.6147 mL
50 mM	0.0523 mL	0.2615 mL	0.5229 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

Duan L, et al. KDM4/JMJD2 Histone Demethylase Inhibitors Block Prostate Tumor Growth by Suppressing the Expression of AR and BMYB-Regulated Genes. Chem Biol. 2015 Sep 17;22(9):1185-96.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

This product is for Research Use Only · Not for Human or Veterinary or Therapeutic Use

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