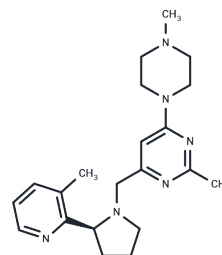


CXCR4 antagonist 6

Chemical Properties

CAS No. :	2304750-68-1
Formula:	C ₂₁ H ₃₀ N ₆
Molecular Weight:	366.5
Storage:	Store at low temperature Powder: -20°C for 3 years In solvent: -80°C for 1 year <small>Actual storage temperature shall be subject to the COA.</small>



Biological Description

Description	CXCR4 antagonist 6 (compound 46) is a highly potent small-molecule inhibitor of the chemokine receptor CXCR4 with an IC ₅₀ value of 79 nM, effectively suppressing CXCL12-induced cytosolic calcium flux with an IC ₅₀ of 0.25 nM, significantly inhibiting CXCL12/CXCR4-mediated cell migration, and demonstrating pronounced therapeutic efficacy in a mouse model of cancer metastasis, highlighting its value for cancer biology, metastasis research, and chemokine signaling studies.
Targets(IC ₅₀)	CXCR
In vitro	Method: Novel CXCR4 antagonists based on a pyrrolidine scaffold were synthesized and evaluated using receptor binding assays, calcium flux assays, transwell migration assays, liver microsome stability tests, and a mouse cancer metastasis model. Result: CXCR4 antagonist 6 showed potent CXCR4 antagonism with IC ₅₀ values of 79 nM for receptor binding and 0.25 nM for calcium flux inhibition, reduced CXCL12-mediated cell migration, exhibited improved metabolic stability, and demonstrated significant anti-metastatic efficacy in mice[1].

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.7285 mL	13.6426 mL	27.2851 mL
5 mM	0.5457 mL	2.7285 mL	5.457 mL
10 mM	0.2729 mL	1.3643 mL	2.7285 mL
50 mM	0.0546 mL	0.2729 mL	0.5457 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

Li Z, et al. Design, synthesis, and evaluation of pyrrolidine based CXCR4 antagonists with in vivo anti-tumor metastatic activity. Eur J Med Chem. 2020;205:112537.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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