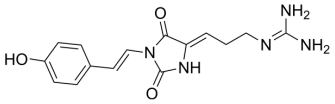
CXCR4 antagonist 7

Cat. No.:	HY-147808
CAS No.:	1185451-72-2
Molecular Formula:	$C_{15}H_{17}N_5O_3$
Molecular Weight:	315.33
Target:	CXCR; HIV
Pathway:	GPCR/G Protein; Immunology/Inflammation; Anti-infection
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	CXCR4 antagonist 7 (Compound PARA-B) is a CXCR4 antagonist with the IC_{50} of 9.3 nM. CXCR4 antagonist 7 can be used for the research of HIV infection, inflammatory diseases, cancer, and WHIM syndrome[1].
IC_{50} & Target	CXCR4/CXCL12 9.3 nM (IC_{50})

In Vitro

CXCR4 antagonist 7 (PARA-B, 10 nM-1 μM, 20 h) inhibits CXCL12-induced GH4C1 cell proliferation with an IC_{50} value of 9.3 nM [1].

CXCR4 antagonist 7 (1 μM, 12 h) inhibits CXCL12-dependent GH4C1 cell migration with inhibition rate of 50%[1].

CXCR4 antagonist 7 (50 nM, 30 min) reduces ERK1/2 phosphorylation induced by CXCL12[1].

CXCR4 antagonist 7 (50 nM-1 μM, 30 min) acts via CXCR4 antagonism to revert CXCL12 induction of GH4C1 proliferation and migration[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Viability Assay[1]

Cell Line:	GH4C1 cell (48 h of serum deprivation)
Concentration:	1 μM
Incubation Time:	24 h
Result:	Had no effect on cell viability of GH4C1 cell.

Cell Proliferation Assay[1]

Cell Line:	GH4C1 cell (FBS-starved GH4C1 cells treated with CXCL12 (25 nM) for 12 h)
Concentration:	10 nM-1 μM
Incubation Time:	20 h, 24 h
Result:	Inhibited proliferation of multiple cancer cell lines with IC_{50} value ranging from 1.08 to 3.45 μM, and had no effect on cell viability of GH4C1cell.

Cell Migration Assay [1]

Cell Line:	GH4C1 and GH4A11 cells (FBS-starved cells treated with CXCL12 (25 nM) for 48 h)
Concentration:	50 nM-1 μM
Incubation Time:	12 h for GH4C1, 30 min for GH4A11
Result:	Reduced the number of migrating GH4C1 cells significantly, had no effect on GH4A11 cell (CRISPR-CAS9, reduction in CXCR4 mRNA) migration.

Western Blot Analysis[1]

Cell Line:	GH4C1 cell (FBS-starved cells treated with CXCL12 (25 nM) for 15 min)
Concentration:	50 nM
Incubation Time:	30 min
Result:	Reduced ERK1/2 phosphorylation induced by CXCL12.

REFERENCES

[1]. Rosa Maria Vitale, et al. Identification of the hydantoin alkaloids parazoanthines as novel CXCR4 antagonists by computational and in vitro functional characterization. Bioorg Chem. 2020 Dec;105:104337.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA