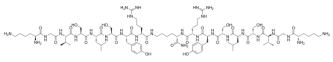
CTCE-9908



Cat. No.:	HY-P1103
CAS No.:	1030384-98-5
Molecular Formula:	$C_{86}H_{147}N_{27}O_{23}$
Molecular Weight:	1927.25
Sequence:	Sequence 1:Lys-Gly-Val-Ser-Leu-Ser-Tyr-Arg-Lys-NH2;Sequence 1':Lys-Gly-Val-Ser-Leu-Ser-Tyr-Arg (Amide bridge:Lys9-Arg8')
Sequence Shortening:	Sequence 1:KGVSLSYRK-NH2;Sequence 1':KGVSLSYR (Amide bridge:Lys9-Arg8')
Target:	CXCR
Pathway:	GPCR/G Protein; Immunology/Inflammation
Storage:	Stored under nitrogen, away from moisture Powder -80°C 2 years -20°C 1 year * In solvent : -80°C, 6 months; -20°C, 1 month (stored under nitrogen, away from moisture)

SOLVENT & SOLUBILITY

In Vitro

H_2O : 33.33 mg/mL (17.29 mM; Need ultrasonic)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	0.5189 mL	2.5944 mL	5.1887 mL
	5 mM	0.1038 mL	0.5189 mL	1.0377 mL
	10 mM	0.0519 mL	0.2594 mL	0.5189 mL

Please refer to the solubility information to select the appropriate solvent.

BIOLOGICAL ACTIVITY

Description

CTCE-9908 is a potent and selective CXCR4 antagonist. CTCE-9908 induces mitotic catastrophe, cytotoxicity and inhibits migration in CXCR4-expressing ovarian cancer cells[1][2].

IC_{50} & Target

CXCR4

In Vitro

CTCE-9908 (0-300 μg/mL; for 10 d) inhibits migration and growth in CXCR4-expressing in ovarian cancer cell lines (IGROV, TOV21G and SKOV3). CTCE-9908 inhibits ovarian cancer cell migration to CXCL12. CTCE-9908 does not cause apoptosis or cellular senescence, but induces multinucleation, G2-M arrest, and abnormal mitosis in ovarian cancer cells. CTCE-9908 deregulates DNA damage checkpoint proteins and spindle assembly checkpoint proteins at G2-M phases of the cell cycle[1].

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

In Vivo	CTCE-9908 (25, 50 and 100 mg/kg; s.c.; 5 days per week for 4.5 weeks) alone slows the rate of primary breast tumor growth, with a 45% inhibition of primary tumor growth at 3.5 weeks of treatment with 50 mg/kg in FVB/N TgN (MMTV-PyMT)^{634} male mice[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Joseph Kwong, et al. An antagonist of the chemokine receptor CXCR4 induces mitotic catastrophe in ovarian cancer cells. Mol Cancer Ther. 2009 Jul;8(7):1893-905.

[2]. Saima Hassan, et al. CXCR4 peptide antagonist inhibits primary breast tumor growth, metastasis and enhances the efficacy of anti-VEGF treatment or docetaxel in a transgenic mouse model. Int J Cancer. 2011 Jul 1;129(1):225-32.

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