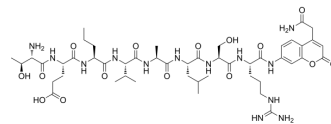


Allo-aca

Cat. No.:	HY-P3212
Molecular Formula:	C ₄₈ H ₇₅ N ₁₃ O ₁₅
Molecular Weight:	1074.19
Sequence:	{H-allo}-Thr-Glu-{Nva}-Val-Ala-Leu-Ser-Arg-{Aca}-NH ₂
Sequence Shortening:	{H-allo}-TE-{Nva}-VALSR-{Aca}-NH ₂
Target:	Others
Pathway:	Others
Storage:	Sealed storage, away from moisture
	Powder -80°C 2 years
	-20°C 1 year
	* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro

H₂O : 50 mg/mL (46.55 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	1 mM	0.9309 mL	4.6547 mL	9.3093 mL
	5 mM	0.1862 mL	0.9309 mL	1.8619 mL
	10 mM	0.0931 mL	0.4655 mL	0.9309 mL

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

BIOLOGICAL ACTIVITY

Description

Allo-aca, a leptin peptidomimetic, is a potent, specific leptin receptor antagonist peptide. Allo-aca blocks leptin signaling and action in numerous in vitro and in vivo models^{[1][2]}.

In Vitro

Allo-aca inhibits leptin-induced proliferation of MDA-MB-231 cells at 50 pM concentration. Allo-aca inhibits leptin-induced proliferation of MCF-7 cells with an IC₅₀ of 200 pM^[1].
 ?Allo-aca at 250 nmol/L reduces VEGF-dependent leptin mRNA expression in both cell lines below base levels. Allo-aca inhibits VEGF mitogenic effects. Allo-aca inhibits VEGF-induced chemotaxis and chemokinesis in RF/6A retinal endothelial cells^[2].
 MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

In an MDA-MB-231 orthotopic mouse xenograft model, Allo-aca administered subcutaneously significantly extends the average survival time from 15.4 days (untreated controls) to 24 and 28.1 days at 0.1 and 1mg/kg/day doses, respectively^[1].
 MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

- [1]. Otvos L Jr, et al. Efficacy of a leptin receptor antagonist peptide in a mouse model of triple-negative breast cancer. *Eur J Cancer*. 2011;47(10):1578-1584.
- [2]. Coroniti R, et al. Designer Leptin Receptor Antagonist Allo-aca Inhibits VEGF Effects in Ophthalmic Neoangiogenesis Models [published correction appears in *Front Mol Biosci*. 2016 Nov 18;3:75]. *Front Mol Biosci*. 2016;3:67. Published 2016 Oct 13.
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Caution: Product has not been fully validated for medical applications. For research use only.

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