HSDVHK-NH2

Cat. No.: HY-P1187

CAS No.: 848644-86-0

Molecular Formula: $C_{30}H_{48}N_{12}O_9$

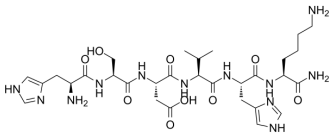
Molecular Weight: 720.78

Sequence Shortening: HSDVHK-NH2

Target: Integrin

Pathway: Cytoskeleton

Storage: Sealed storage, away from moisture and light
Powder -80°C 2 years
-20°C 1 year
* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture and light)



SOLVENT & SOLUBILITY

In Vitro

H_2O : 250 mg/mL (346.85 mM; Need ultrasonic)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	1.3874 mL	6.9369 mL	13.8739 mL
	5 mM	0.2775 mL	1.3874 mL	2.7748 mL
	10 mM	0.1387 mL	0.6937 mL	1.3874 mL

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

In Vivo

1. Add each solvent one by one: PBS
Solubility: 100 mg/mL (138.74 mM); Clear solution; Need ultrasonic

BIOLOGICAL ACTIVITY

Description

HSDVHK-NH2 is an antagonist of the integrin αvβ3-vitronectin interaction, with an IC_{50} of 1.74 pg/mL (2.414 pM)[1][2].

IC_{50} & Target

αvβ3
2.74 nM (IC_{50})

In Vitro

HSDVHK significantly inhibited bFGF-induced cell migration compared to the PBS control group[1].
The Arg-Gly-Asp (RGD)-binding site recognition by HSDVHK-NH2 (P11) is site specific because the HSDVHK-NH2 (P11) is inactive for the complex formation of a denatured form of integrin–vitronectin. HSDVHK-NH2 (P11) shows a strong antagonism against avb3-GRGDSP interaction with an IC_{50} value of 25.72 nM[2].
HSDVHK-NH2 (P11) inhibits the HUVEC proliferation due to the induction of HUVEC cell death through caspases activations

and its mechanism is related with increased p53 expression[3].

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

Cell Proliferation Assay[3]

Cell Line:	HUVEC cells.
Concentration:	0.1, 1, 10, and 100 μg/mL.
Incubation Time:	72 h.
Result:	Significantly inhibited HUVEC proliferation on denatured collagen-coated plates in a dose-dependent manner.

REFERENCES

[1]. Yoonsuk Lee, et al. High-throughput screening of novel peptide inhibitors of an integrin receptor from the hexapeptide library by using a protein microarray chip. J Biomol Screen. 2004 Dec;9(8):687-94.

[2]. Youngjin Choi, et al. Site-specific inhibition of integrin alpha v beta 3-vitronectin association by a ser-asp-val sequence through an Arg-Gly-Asp-binding site of the integrin. Proteomics. 2010 Jan;10(1):72-80.

[3]. Ji-Young Bang, et al. Pharmacoproteomic analysis of a novel cell-permeable peptide inhibitor of tumor-induced angiogenesis. Mol Cell Proteomics. 2011 Aug;10(8):M110.005264.

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