d[Cha4]-AVP

Cat. No.: HY-P1390

CAS No.: 500170-27-4

Molecular Formula: $C_{50}H_{71}N_{13}O_{11}S_2$

Molecular Weight: 1094.31

Sequence: {Mpa}-Tyr-Phe-{Cha}-Asn-Cys-Pro-Arg-Gly-NH2 (Disulfide bridge:Mpa1-Cys6)

Sequence Shortening: {Mpa}-YF-{Cha}-NCPRG-NH2 (Disulfide bridge: Mpa1-Cys6)

Target: Vasopressin Receptor

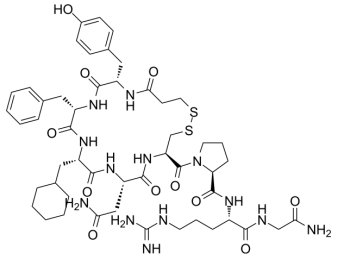
Pathway: GPCR/G Protein

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

H_2O : 100 mg/mL (91.38 mM; Need ultrasonic)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	0.9138 mL	4.5691 mL	9.1382 mL
	5 mM	0.1828 mL	0.9138 mL	1.8276 mL
	10 mM	0.0914 mL	0.4569 mL	0.9138 mL

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

BIOLOGICAL ACTIVITY

Description

d[Cha4]-AVP is a potent and selective vasopressin (AVP) V1b receptor agonist with a K_i of 1.2 nM for human V1b receptor. d[Cha4]-AVP shows more selective for V1b receptor than human V1a receptor, V2 receptor, and oxytocin receptors[1][2].

IC_{50} & Target

Ki: 1.2 nM (vasopressin V1B receptor), 151 nM (vasopressin V1A receptor), 240 nM (Oxytocin receptor), 750 nM (vasopressin V2 receptor)[1]

In Vitro

d[Cha4]-AVP binds to hV1b receptors and human oxytocin receptors with pK_i values of 9.68 and 7.68, respectively[2]. d[Cha4]-AVP stimulates $[Ca^{2+}]_i$ increase in hV1b-CHO cells with a pEC_{50} value of 10.05. d[Cha4]-AVP shows pEC_{50} values of 6.53 and 5.92 at hV1a and hV2 receptors, respectively, and behaved as a weak antagonist at hOT receptors (pKB=6.31)[2].

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

REFERENCES

[1]. Cristiana Griffante, et al. Selectivity of d[Cha4]AVP and SSR149415 at human vasopressin and oxytocin receptors: evidence that SSR149415 is a mixed vasopressin V1b/oxytocin receptor antagonist. Br J Pharmacol. 2005 Nov;146(5):744-51.

[2]. Ling Ling Cheng, et al. Design of potent and selective agonists for the human vasopressin V1b receptor based on modifications of [deamino-cys1]arginine vasopressin at position 4. J Med Chem. 2004 Apr 22;47(9):2375-88.

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