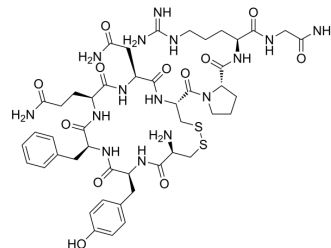


Vasopressin

Cat. No.:	HY-B1811
CAS No.:	11000-17-2
Molecular Formula:	C ₄₆ H ₆₅ N ₁₅ O ₁₂ S ₂
Molecular Weight:	1084.23
Sequence:	Cys-Tyr-Phe-Gln-Asn-Cys-Pro-Arg-Gly-NH ₂ (Disulfide bridge: Cys1-Cys6)
Sequence Shortening:	CYFQNCPRG-NH ₂ (Disulfide bridge: Cys1-Cys6)
Target:	Endogenous Metabolite
Pathway:	Metabolic Enzyme/Protease
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

DMSO : 100 mg/mL (92.23 mM; Need ultrasonic)
 H₂O : 50 mg/mL (46.12 mM; Need ultrasonic)

Concentration	Solvent	Mass		
		1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM	0.9223 mL	4.6116 mL	9.2231 mL
	5 mM	0.1845 mL	0.9223 mL	1.8446 mL
	10 mM	0.0922 mL	0.4612 mL	0.9223 mL

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

In Vivo

- Add each solvent one by one: PBS
Solubility: 25 mg/mL (23.06 mM); Clear solution; Need ultrasonic and warming
- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
Solubility: ≥ 2.5 mg/mL (2.31 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
Solubility: ≥ 2.5 mg/mL (2.31 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil
Solubility: ≥ 2.5 mg/mL (2.31 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Vasopressin is a cyclic nonapeptide that is synthesized centrally in the hypothalamus. Vasopressin participates in the hypothalamic-pituitary-adrenal axis, and regulates pituitary corticotropin secretion by potentiating the stimulatory effects

	of corticotropin releasing factor. Vasopressin also can act as a neurotransmitter, exerting its action by binding to specific G protein-coupled receptors ^{[1][2][3]} .
IC₅₀ & Target	Human Endogenous Metabolite
In Vitro	AVP (0.01 nM-1 μM) induces Ca ²⁺ increase in Chinese hamster ovary cells expressing rat or human V _{1b} receptors ^[2] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	Vasopressin (0.03-0.3 μg/kg; i.p.) potentiates corticotropin release provoked by exogenous corticoliberin and increases corticotropin secretion subsequent to body water loss ^[2] . ?Vasopressin (0.001-0.1 mg/kg; i.p.) potently increases adjacent lying, where rats meeting for the first time lie passively next to each other ^[3] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Eur J Pharmacol. 10 September 2022, 175262.
- Endocrinology. 2023 Jan 9;164(3):bqac217.
- Endocrinology. 2023.
- SSRN. 2023 May 30.

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- [1]. Baribeau DA, et, al. Oxytocin and vasopressin: linking pituitary neuropeptides and their receptors to social neurocircuits. *Front Neurosci*. 2015 Sep 24;9:335.
- [2]. Ramos L, et, al. Acute prosocial effects of oxytocin and vasopressin when given alone or in combination with 3,4-methylenedioxymethamphetamine in rats: involvement of the V1A receptor. *Neuropsychopharmacology*. 2013 Oct;38(11):2249-59.
- [3]. Gal CSL, et, al. Characterization of (2S,4R)-1-[5-chloro-1-[(2,4-dimethoxyphenyl)sulfonyl]-3-(2-methoxy-phenyl)-2-oxo-2,3-dihydro-1H-indol-3-yl]-4-hydroxy-N,N-dimethyl-2-pyrrolidine carboxamide (SSR149415), a selective and orally active vasopressin V1b receptor antagonist. *J Pharmacol Exp Ther*. 2002 Mar;300(3):1122-30.

Caution: Product has not been fully validated for medical applications. For research use only.

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