# Neuropeptide W-23 (human)

**Cat. No.:** HY-P1035

**CAS No.:** 383415-79-0

**Molecular Formula:** $C_{119}H_{183}N_{35}O_{28}S$

**Molecular Weight:** 2584

**Sequence:** Trp-Tyr-Lys-His-Val-Ala-Ser-Pro-Arg-Tyr-His-Thr-Val-Gly-Arg-Ala-Ala-Gly-Leu-Leu-Met-Gly-Leu

Trp-Tyr-Lys-His-Val-Ala-Ser-Pro-Arg-Tyr-His-Thr-Val-Gly-Arg-Ala-Ala-Gly-Leu-Leu-Met-Gly-Leu

**Sequence Shortening:** WYKHVASPRYHTVGRAAGLLMGL

**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**

DMSO : ≥ 50 mg/mL (19.35 mM)
* "≥" means soluble, but saturation unknown.

**Preparing Stock Solutions**

| Solvent / Mass / Concentration | 1 mg | 5 mg | 10 mg |
|---|---|---|---|
| 1 mM | 0.3870 mL | 1.9350 mL | 3.8700 mL |
| 5 mM | 0.0774 mL | 0.3870 mL | 0.7740 mL |
| 10 mM | 0.0387 mL | 0.1935 mL | 0.3870 mL |

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

## BIOLOGICAL ACTIVITY

**Description**

Neuropeptide W-23 (human) (NPW-23), the active form of Neuropeptide W, is an endogenous agonist of NPBW1 (GPR7) and NPBW2 (GPR8)[1].

**$IC_{50}$ & Target**

NPBW1, NPBW2[1]

**In Vitro**

Neuropeptide W-23 (human) (NPW-23) increases the $I_{Ca,L}$ in transfected human embryonic kidney 293 cells and VSMCs via GPR7[1].

Neuropeptide W-23 (human) increases the expression of pan phospho-PKC, intracellular diacylglycerol level, and the second messenger catalyzed by PLC[1].

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

**In Vivo**

Neuropeptide W-23 (human) (NPW-23) (0.3-3.0 nM; intracerebroventricular injection; 2 μL) increases total behavioral activity, including locomotion and grooming in conscious rats[2].
Neuropeptide W-23 (human) (NPW-23) (2-8 nM; i.c.v.; 10 μL) shows anorexigenic effect in rats[3].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

| | |
|---|---|
| Animal Model: | Male Harlan Sprague-Dawley rats, 250–300 g[2] |
| Dosage: | 0.3, 1.0 and 3.0 nM |
| Administration: | Intracerebroventricular injection, 2 μL |
| Result: | Caused significant increases in mean arterial pressure. Demonstrated a significant increase in total activity, ambulatory activity, and duration of stereotypy. |

| | |
|---|---|
| Animal Model: | Male Wistar rats weighing 250–300 g[3] |
| Dosage: | 2, 4, 6 and 8 nM |
| Administration: | Intra-cerebroventricular injection, 10 μL |
| Result: | Decreased dark feeding and fasting-induced feeding, decreased feeding intake and weight gain. |

## REFERENCES


[1]. Naso T, et al. Central neuropeptide W has anorexigenic effect in rats. J Anim Physiol Anim Nutr (Berl). 2014 Apr;98(2):228-34.

[2]. Ji L, et al. Modulation of CaV1.2 calcium channel by neuropeptide W regulates vascular myogenic tone via G protein-coupled receptor 7. J Hypertens. 2015 Dec;33(12):2431-42.

[3]. Pate AT, et al. Neuropeptide W increases mean arterial pressure as a result of behavioral arousal. Am J Physiol Regul Integr Comp Physiol. 2013 Oct 1;305(7):R804-10.





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