PRODUCT INFORMATION

Neuropeptide W-23 (human) (trifluoroacetate salt)

Item No. 24551

Formal Name: L-tryptophyl-L-tyrosyl-L-lysyl-L-histidyl-L-valyl-L-alanyl-L-seryl-L-prolyl-L-arginyl-L-tyrosyl-L-histidyl-L-threonyl-L-valylglycyl-L-arginyl-L-alanyl-L-alanylglycyl-L-leucyl-L-leucyl-L-methionylglycyl-L-leucine, trifluoroacetate salt

Synonym: NPW23 (human)

MF: $C_{119}H_{183}N_{35}O_{28}S \bullet XCF_3COOH$

FW: 2,584.0

Purity: ≥95%

Supplied as: A lyophilized powder

Storage: -20°C

Stability: ≥4 years

H—Trp—Tyr—Lys—His—Val—Ala—Ser—Pro—Arg—Tyr—
His—Thr—Val—Gly—Arg—Ala—Ala—Gly—Leu—Leu—
Met—Gly—Leu—OH
• XCF_3COOH

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Neuropeptide W-23 (NPW23) (human) (trifluoroacetate salt) is supplied as a lyophilized powder. A stock solution may be made by dissolving the NPW23 (human) (trifluoroacetate salt) in water. The solubility of NPW23 (human) (trifluoroacetate salt) in water is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

NPW23 is an endogenous neuropeptide ligand for the orphan G protein-coupled receptors GPR7 and GPR8 (K_is = 31.8 and 20.7 pM, respectively).[1] It inhibits forskolin-induced cAMP accumulation in CHO cells expressing human GPR7 and GPR8 with IC_{50} values of 0.025 and 0.178 nM, respectively. NPW23 (3 nmol) stimulates prolactin release in rats but has no effect on other pituitary hormones. NPW23 attenuates mechanical allodynia, but not thermal hyperalgesia, induced by carrageenan injection in rat paw in a dose-dependent manner.[2] It also decreases food intake and weight gain as well as increases body temperature and thermogenesis in rats.[3]

References

1. Shimomura, Y., Harada, M., Goto, M., *et al.* Identification of neuropeptide W as the endogenous ligand for orphan G-protein-coupled receptors GPR7 and GPR8. *J. Biol. Chem.* **277(39)**, 35826-35832 (2002).
2. Yamamoto, T., Saito, O., Shono, K., *et al.* Anti-hyperalgesic effects of intrathecally administered neuropeptide W-23, and neuropeptide B, in tests of inflammatory pain in rats. *Brain Res.* **1045(1-2)**, 97-106 (2005).
3. Naso, T., Shousha, S., and El-Kirdasy, A. Central neuropeptide W has anorexigenic effect in rats. *J. Anim. Physiol. Anim. Nutr. (Berl.)* **98(2)**, 228-234 (2014).

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