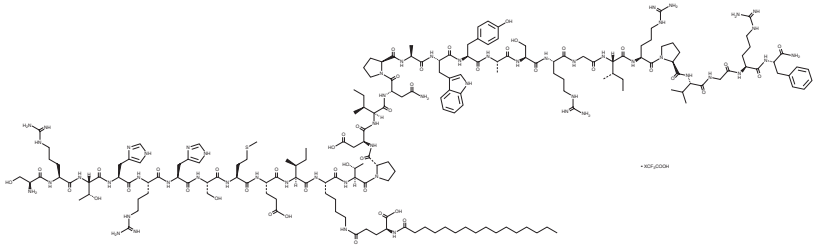
PRODUCT INFORMATION

palm^{11}-PrRP31 (trifluoroacetate salt)

Item No. 46579

Synonym:	palm^{11}-Prolactin-Releasing Peptide 31
Peptide Sequence:	SRTHRHSMEIK(N-γE(N-palm))-TPDINPAWYASRGIRPVGRF-NH_2
MF:	$C_{181}H_{289}N_{55}O_{46}S \bullet XCF_3COOH$
FW:	4,003.7
Purity:	≥95%
Supplied as:	A solid
Storage:	-20°C
Stability:	≥4 years



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

Laboratory Procedures

palm^{11}-PrRP31 (trifluoroacetate salt) is supplied as a solid. A stock solution may be made by dissolving the palm^{11}-PrRP31 (trifluoroacetate salt) in the solvent of choice, which should be purged with an inert gas. palm^{11}-PrRP31 (trifluoroacetate salt) is sparingly soluble (1-10 mg/ml) in acetonitrile:water (1:1).

Description

palm^{11}-PrRP31 is a synthetic lipopeptide agonist of G protein-coupled receptor 10 (GPR10) and a derivative of human prolactin-releasing peptide (1-31) (PrRP-31; Item No. 24986) that is acylated at the Lys^{11} residue with palmitic acid (Item Nos. 10006627 | 43561) *via* a γ-L-glutamic acid linker.[1] palm^{11}-PrRP31 induces GPR10 transactivation in a reporter assay using CHO-K1 cells overexpressing GPR10 (EC_{50} = 39 pM). It binds to GPR10, neuropeptide FF receptor 1 ($NPFF_1$), and $NPFF_2$ (K_is = 3.5, 21, and 9.1 nM, respectively) and increases the levels of phosphorylated Akt, ERK, and CREB in CHO-K1 cells expressing GPR10 or $NPFF_2$. palm^{11}-PrRP31 (5 mg/kg, s.c.) decreases food intake in fasted mice and reduces white adipose tissue (WAT) and body weight in a mouse model of diet-induced obesity. It reduces spatial memory deficits and hippocampal tau phosphorylation in a mouse model of Alzheimer's disease.[2]

References

1. Strnadová, V., Karnošová, A., Blechová, M., *et al.* Search for lipidized PrRP analogs with strong anorexigenic effect: *In vitro* and *in vivo* studies. *Neuropeptides* **98:102319**, (2023).
2. Popelová, A., Pražienková, V., Neprašová, B., *et al.* Novel lipidized analog of prolactin-releasing peptide improves memory impairment and attenuates hyperphosphorylation of tau protein in a mouse model of tauopathy. *J. Alzheimers Dis.* **62(4)**, 1725-1736 (2018).

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent *via* email to your institution.

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