PRODUCT INFORMATION

Ghrelin (rat) (palmitoyl) (trifluoroacetate salt)

Item No. 24983

Formal Name: glycyl-L-seryl-O-(1-oxohexadecyl)-L-seryl-L-phenylalanyl-L-leucyl-L-seryl-L-prolyl-L-α-glutamyl-L-histidyl-L-glutaminyl-L-lysyl-L-alanyl-L-glutaminyl-L-glutaminyl-L-arginyl-L-lysyl-L-α-glutamyl-L-seryl-L-lysyl-L-lysyl-L-prolyl-L-prolyl-L-alanyl-L-lysyl-L-leucyl-L-glutaminyl-L-prolyl-L-arginine, trifluoroacetate salt

MF: $C_{155}H_{261}N_{45}O_{42} \bullet XCF_3COOH$

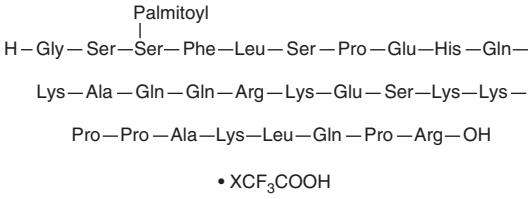
FW: 3,427.0

Purity: ≥95%

Supplied as: A lyophilized powder

Storage: -20°C

Stability: ≥4 years



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

Laboratory Procedures

Ghrelin (rat) (palmitoyl) (trifluoroacetate salt) is supplied as a lyophilized powder. A stock solution may be made by dissolving the ghrelin (rat) (palmitoyl) (trifluoroacetate salt) in the solvent of choice, which should be purged with an inert gas. Ghrelin (rat) (palmitoyl) (trifluoroacetate salt) is soluble in the organic solvent formic acid at a concentration of approximately 1 mg/ml.

Description

Ghrelin is an endogenous gastrointestinal hormone and neuropeptide that binds to the growth hormone (GH) secretagogue receptor (GHS-R).[1,2] Ghrelin requires an n-octanoyl modification at serine 3 for binding to GHS-R.[3] Ghrelin (rat) (palmitoyl) is a palmitoylated form of ghrelin. Palmitoylated ghrelin is an agonist of GHS-R with a similar potency as octanoyl-ghrelin in HEK293 cells expressing human GHS-R1a (IC_{50} = 0.87 nM; EC_{50} = 8.3 nM for increasing calcium accumulation). In mice, palmitoylated ghrelin (0.9 nmol, i.c.v.) increases food intake after 24 hours but not at shorter timepoints of two and four hours. It also increases fat mass without effects on locomotor activity or energy expenditure.[4]

References

1. Kojima, M., Hosoda, H., Date, Y., *et al.* Ghrelin is a growth-hormone-releasing acylated peptide from stomach. *Nature* **402(6762)**, 656-660 (1999).
2. Dickson, S.L., Egecioglu, E., Landgren, S., *et al.* The role of the central ghrelin system in reward from food and chemical drugs. *Mol. Cell Endocrinol.* **340(1)**, 80-87 (2011).
3. Resh, M.D. Fatty acylation of proteins: The long and the short of it. *Prog. Lipid Res.* **63**, 120-131 (2016).
4. Heppner, K.M., Chaudhary, N., Müller, T.D., *et al.* Acylation type determines ghrelin's effects on energy homeostasis in rodents. *Endocrinology* **153(10)**, 4687-4695 (2012).

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