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Produktinformation

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- Diagnostik & molekulare Diagnostik
- Laborgeräte & Service

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Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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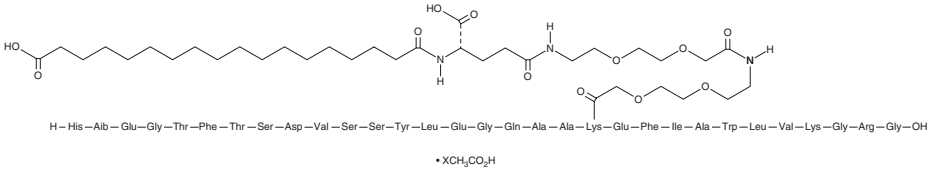
PRODUCT INFORMATION

Semaglutide (acetate)

Item No. 29969



MF:	$C_{187}H_{291}N_{45}O_{59} \bullet XC_2H_4O_2$
FW:	4,113.6
Purity:	≥95%
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥2 years

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

Laboratory Procedures

Semaglutide (acetate) is supplied as a crystalline solid. A stock solution may be made by dissolving the semaglutide (acetate) in the solvent of choice, which should be purged with an inert gas. Semaglutide (acetate) is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of semaglutide (acetate) in these solvents is approximately 30 mg/ml.

Semaglutide (acetate) is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, semaglutide (acetate) should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Semaglutide (acetate) has a solubility of approximately 0.2 mg/ml in a 1:4 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Semaglutide is an agonist of glucagon-like peptide 1 receptor (GLP-1R; EC_{50} = 6.2 pM in a reporter assay using BHK cells expressing the human receptor).[1] It decreases blood glucose levels in the *db/db* mouse model of type 2 diabetes (ED_{50} = <2 nmol/kg). Semaglutide (25 nmol/kg) prevents decreases in the number of dopaminergic neurons in the substantia nigra and increases in lipid peroxidation in the substantia nigra and striatum, as well as improves motor coordination in the rotarod and footprint tests in a mouse model of Parkinson's disease induced by MPTP.[2] It decreases neuronal loss in the hippocampal dentate gyrus and CA1 and CA3 regions and improves motor coordination and grip strength in the beam-walking and hanging wire tests, respectively, in a rat model of stroke induced by permanent middle cerebral artery occlusion (MCAO) when administered at a dose of 10 nmol/kg every other day.[3] Formulations containing semaglutide have been used in the treatment of type 2 diabetes.

References

1. Lau, J., Bloch, P., Schäffer, L., *et al.* Discovery of the once-weekly glucagon-like peptide-1 (GLP-1) analogue semaglutide. *J. Med. Chem.* **58(18)**, 7370-7380 (2015).
2. Zhang, L., Zhang, L., Li, L., *et al.* Neuroprotective effects of the novel GLP-1 long acting analogue semaglutide in the MPTP Parkinson's disease mouse model. *Neuropeptides* **71**, 70-80 (2018).
3. Yang, X., Feng, P., Zhang, X., *et al.* The diabetes drug semaglutide reduces infarct size, inflammation, and apoptosis, and normalizes neurogenesis in a rat model of stroke. *Neuropharmacology* **158:107748** (2019).

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