

**Product Name:** Semaglutide

**Catalog No.:** 8946

**Batch No.:** 1

CAS Number: 910463-68-2

**1. PHYSICAL AND CHEMICAL PROPERTIES**

**Batch Molecular Formula:** C<sub>187</sub>H<sub>291</sub>N<sub>45</sub>O<sub>59</sub>

**Batch Molecular Weight:** 4113.64

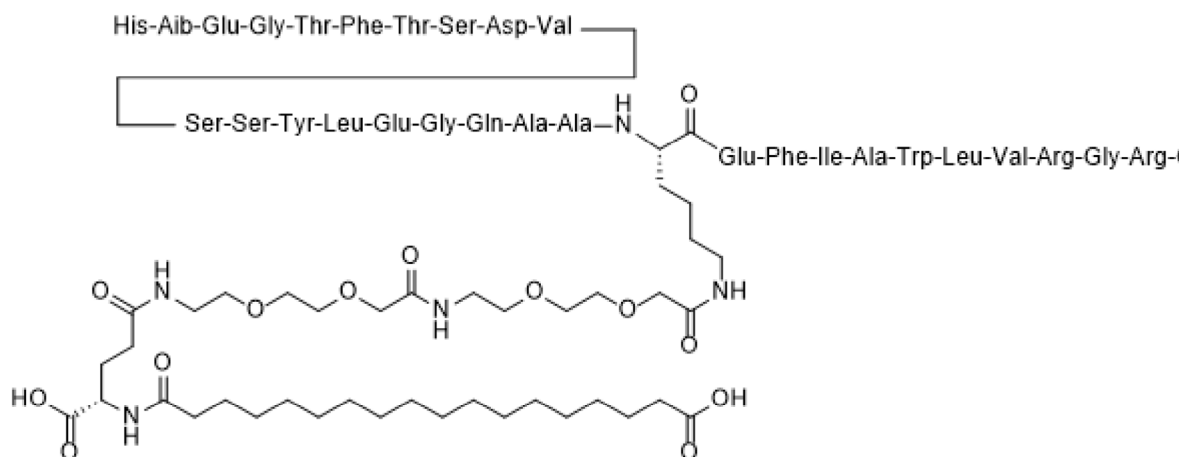
**Physical Appearance:** White lyophilised solid

**Counter Ion:** Sodium

**Solubility:** Soluble to 1 mg/ml in water

**Storage:** Store at -20°C

**Peptide Sequence:**



**2. ANALYTICAL DATA**

**HPLC:** Shows 98.4% purity

**Mass Spectrum:** Consistent with structure

**3. AMINO ACID ANALYSIS DATA**

Amino Acid		Theoretical	Actual	Amino Acid		Theoretical	Actual
Ala	3.00	2.98	Lys	1.00	0.99		
Arg	2.00	1.98	Met				
Asx	1.00	0.99	Phe	2.00	1.98		
Cys			Pro				
Glx	5.00	4.99	Ser	3.00	1.87		
Gly	4.00	4.20	Thr	2.00	1.58		
His	1.00	0.98	Trp	1.00	0.12		
Ile	1.00	0.99	Tyr	1.00	0.96		
Leu	2.00	1.97	Val	2.00	1.99		

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

**Product Name: Semaglutide**

**Catalog No.: 8946**

**Batch No.: 1**

CAS Number: 910463-68-2

**Description:**

Semaglutide is a glucon-like peptide 1 analog and a potent and long-acting GLP-1R agonist. Upon activating GLP-1R, Semaglutide promotes insulin secretion, inhibits gastric emptying and appetite, causing lasting and reversible weight loss in normal and obese rats. Semaglutide enhances autophagy by increasing the expression of LC3II, Atg7, Beclin-1 and P62; inhibits oxidative stress and apoptosis. Semaglutide has neuroprotective properties in a stroke animal model, where neurogenesis and growth factor cell signaling is normalized. Semaglutide can be used for the study of neurodegenerative diseases and liver diseases such as type 2 diabetes, o... Please see product specific page on www.tocris.com for full description.

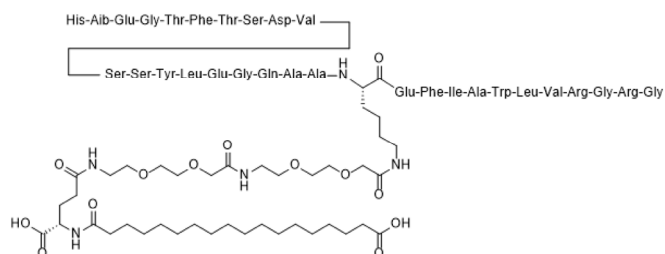
**Physical and Chemical Properties:**

Batch Molecular Formula: C<sub>187</sub>H<sub>291</sub>N<sub>45</sub>O<sub>59</sub>

Batch Molecular Weight: 4113.64

Physical Appearance: White lyophilised solid

**Peptide Sequence:**



**Storage:** Store at -20°C

**Solubility & Usage Info:**

Soluble to 1 mg/ml in water

This product is supplied in lyophilized form. It may appear as a solid, gel or film and be very hard to visualize. Solutions should be made by adding solvent directly to the vial. The vial should then be vortexed vigorously to ensure the product has completely dissolved.

**Counter Ion:** Sodium

**Stability and Solubility Advice:**

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Peptides in solution are much less stable than in lyophilized form. This is especially true for peptides whose sequences contain amino acids such as Cys, Met, Trp, Asn, Gln, and N-terminal Glu.

Therefore we recommend storing peptides in solution for as short a time as possible. Avoid repeated freeze thaw cycles by dividing the peptide solution into aliquots and storing the aliquots at -20°C. Any portion of an aliquot unused after thawing should be discarded.

Peptides stored in solution can occasionally be susceptible to bacterial degradation. We recommend using sterile solutions or passing the peptide solution through a 0.2 µm filter to remove potential bacterial contamination whenever possible.

**References:**

**Mahapatra et al (2022)** Therapeutic potential of semaglutide, a newer GLP-1 receptor agonist, in abating obesity, non-Alcoholic steatohepatitis and neurodegenerative diseases: a narrative review. *Pharm.Res.* **39** 1233. PMID: 35650449.

**Chang et al (2020)** Semaglutide-mediated protection against Aβ correlated with enhancement of autophagy and inhibition of apoptosis. *J.Clin.Neurosc.* **81** 234. PMID: 33222922.

**Gabery et al (2020)** Semaglutide lowers body weight in rodents via distributed neural pathways. *JCI Insight* **5**. PMID: 32213703.

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

**bio-techne.com**

info@bio-techne.com

techsupport@bio-techne.com

**North America**

Tel: (800) 343 7475

**China**

info.cn@bio-techne.com

Tel: +86 (21) 52380373

**Europe Middle East Africa**

Tel: +44 (0)1235 529449

**Rest of World**

www.tocris.com/distributors

Tel:+1 612 379 2956