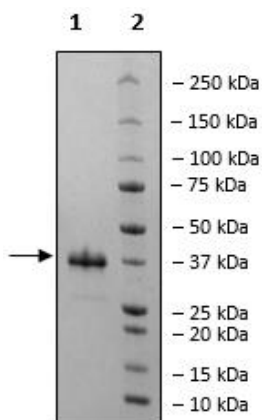


Product Information

Description:	Recombinant human GLP-1 (glucagon-like peptide 1), encompassing amino acids 7-37. This construct contains a C-terminal Fc-Tag from human IgG4, and includes 3 mutations of interest: A8G, G22E and R36G. This protein was affinity purified.
Background:	GLP-1R, a member of the class B family of G protein-coupled receptors (GPCRs or secretin-like receptors), is a transmembrane protein primarily found in pancreatic β cells and brain neurons and is activated by the peptide hormone glucagon-like peptide 1 (GLP-1) and glucagon that is secreted from intestinal L-cells after nutrient ingestion. GLP-1R plays an important role in controlling blood sugar level by enhancing glucose-stimulated insulin secretion, glucose, lipid metabolism, and satiety. Its role in the brain seems to be in the control of appetite. Research efforts have focused on the regulation of the GLP-1R mediated signaling pathway as a therapeutic approach to type 2 diabetes (T2DM) and have resulted in the development of several FDA-approved GLP-1R agonists. Dulaglutide, with the brand name of Trulicity, is a GLP-1R agonist, approved for commercialization since 2014, and by 2020 was amongst the most sold medications in the United States. It is used for the treatment of type 2 diabetes and associated cardiovascular complications. A role in tumor development in patients with T2DM is also being investigated but further studies are required to fully understand the functions of GLP-1R and its agonists.
Species:	Human
Construct:	GLP-1 (7-37-Fc(IgG4))
Mutation:	A8G, G22E, and R36G
Concentration:	0.26 mg/ml
Expression System:	HEK293
Purity:	$\geq 90\%$
Format:	Aqueous buffer solution.
Formulated In:	8 mM phosphate, pH 7.4, 110 mM NaCl, 2.2 mM KCl, and 20% glycerol
MW:	30 kDa
Stability:	At least 6 months at -80°C .
Storage:	-80°C
Instructions for Use:	Thaw on ice and gently mix prior to use. DO NOT VORTEX. Perform a quick spin before opening. Aliquot into small volumes and flash freeze for long term storage. Avoid multiple freeze/thaw cycles.
Assay Conditions:	GLP-1R/CRE Luciferase Reporter HEK293 cells (BPS Bioscience #78176) were plated according to the cell line protocol. A serial dilution of GLP-1 Agonist was prepared and added to the cells. The cells were incubated at 37°C and 5% CO_2 for 5-6 hours. Luciferase activity was measured using the One-Step™ Luciferase Assay System (BPS Bioscience #60690). Data is shown as fold induction of CRE luciferase reporter expression versus an unstimulated control.
Applications:	Useful as an agonist to GLP-1R.

Quality Control Data

4-20% SDS-PAGE Coomassie Staining



GLP-1/CRE Activity

