

## Human Glucagon-like peptide 1 receptor (GLP1R)

Product	Catalog No.	Package size
GLP1R protein (10 µg)	28201-10	1 x 10 µg
GLP1R protein (50 µg)	28201-50	5 x 10 µg

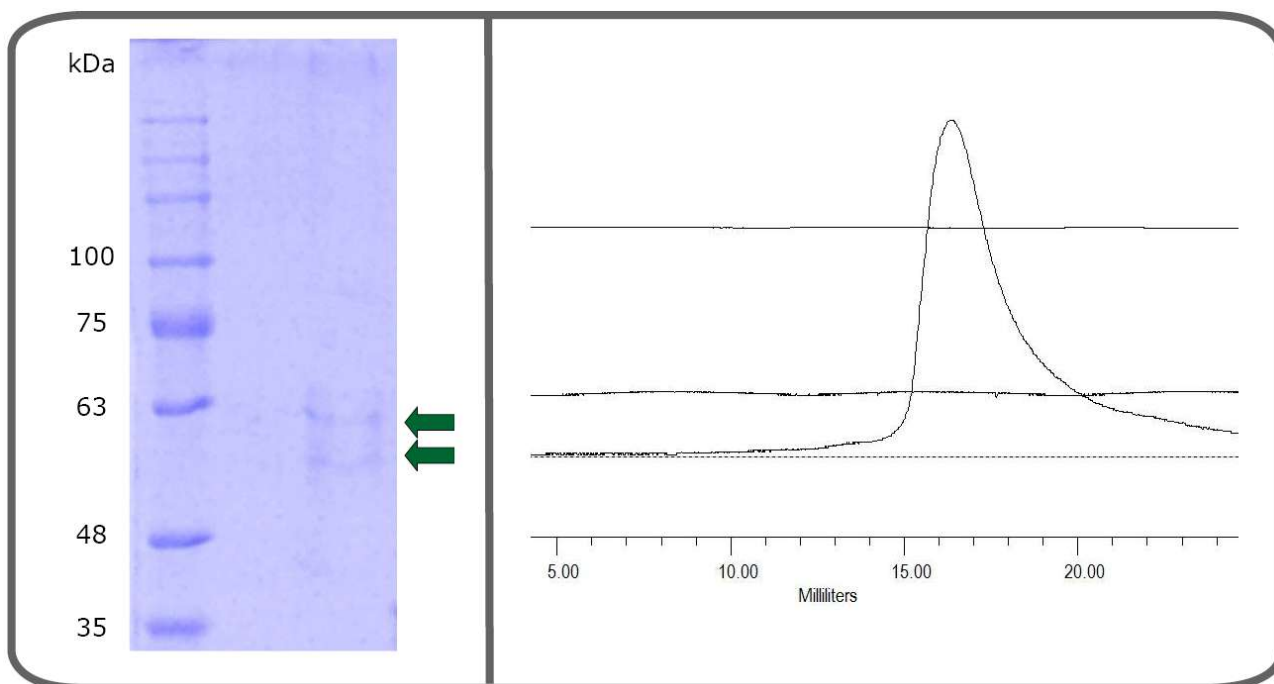
Please contact us for bulk quantities and for GLP1R reconstituted into nanodiscs.

### Product Description

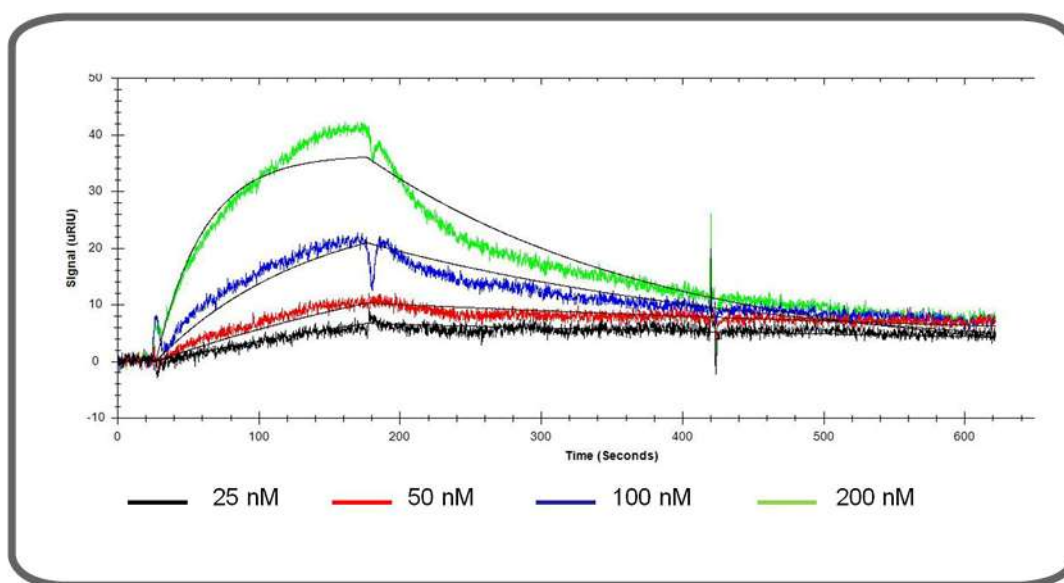
Alternative names	GLP1-receptor
UniProt number	<a href="#">P43220</a>
Protein class	GPCR, class B
Organism	Human (Homo sapiens)
Sequence	Full-length, wildtype sequence <u>N-terminal HA tag</u> (underlined), <b>C-terminal 10x His-tag in red</b> , HRV 3C protease site in <b>blue</b> , <b>spacer in bold grey</b> , <b>Rho1D4 tag in bold green</b>
	<p>           MKTIIALSYIFCLVFARPQGATVSLWETVQKWREYRRQCQRSLTEDPPPATDLFCNRTFDEYACWPD            GEPGSFVNVSCPWYLPWASSVPQGHVYRFCTAEGWLQKDNSSLPWRDLSECEESKRGERSSPEE            QLLFLYIIYTVGYALSFSALVIASAILLGFRHLHCTRNYIHLNLFASFILRALSVEFIKDAALKWMYSTAAQ            QHQWDGLLSYQDSLSCRLVFLMQYCVAANYYWLLVEGVYLYTLAFSVLSEQWIFRLYVSIWGWGP            LLFVVPWGIKLYEDEGCWTRNSNMNYWLIIRLPILFAIGVNFLIFVRVICIVVSKLKANLMCKTDIKC            RLAKSTLTLIPLLGTHEVIFAFVMDEHARGTLRFIKLFTLSFTSFQGLMVAILYCFVNNVQLEFRKSW            ERWRLEHLHIQRDSSMKPLKCPTSSLSSGATAGSSMYTATCQASCS<b>GGHHHHHHHHHHHLEVL</b>FQG  <b>PGSSGTETSQVAPA</b> </p>
Affinity tags	His / Rho1D4 (both C-terminal)
Size (excluding additional elements)	489 (463) amino acids 56,170 (53,026) Da
Function	Receptor for glucagon-like peptide 1. Expressed in pancreas, brain, heart, kidney and the GI tract. Involved in insuline secretion and appetite regulation.

### Quality Control

Purity (SDS-PAGE)	>98%, see Fig. 1
Homogeneity	Size exclusion chromatography
Activity	Ligand binding measured by SPR using the agonist ligand exendin-4 at 10°C. Using a 1:1 binding model, the dissociation constant ( $K_d$ ) was determined to be $6.11 \times 10^{-7}$ M, which is in accordance with published values.



**Fig. 1: Size and purity of GLP1R assessed by SDS-PAGE and size exclusion chromatography.**  
 Note: GLP1R is always detected as a double band in SDS-PAGE.



**Fig. 2: Surface plasmon resonance measurement of GLP1R-exendin interaction.**  
 Using a 1:1 binding model, the  $K_d$  value was determined to  $6.11 \times 10^{-7}$  M.

**Preparation:**

Expression system	Sf9 (Baculovirus)
Purification	Protein-specific affinity matrix using immobilized agonist ligand Size exclusion chromatography (Fig. 1B)
Buffer	20 mM HEPES pH 7.5, 150 mM NaCl, 10% Glycerol, 0.02% Foscholine-12
Form	Liquid

## Applications

- SDS-PAGE
- Western Blot
- Ligand binding assays (e.g. SPR)
- Protein Crystallization
- Biochemical and biophysical analyses

## Shipping & Storage

Shipment Temperature	Dry ice
Storage	-80 °C
	Avoid freeze-thaw cycles

## Literature references:

1. Hwang JI et al. Molecular evolution of GPCRs: GLP1/GLP1 receptors. J. Mol. Endocrinol. (2014) 52 (3) 15-27.
2. Sisley S. et al. Neuronal GLP1R mediates liraglutide's anorectic but not glucose-lowering effect. (2014) J. Clin. inv. 124(6)2456-2463

Disclaimer: Our products are intended for molecular biology applications. These products are not intended for the diagnosis, prevention, or treatment of a disease.

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