

## DATA SHEET

Code: KT28201-10 Human Glucagon-like peptide 1 receptor (GLP1R)

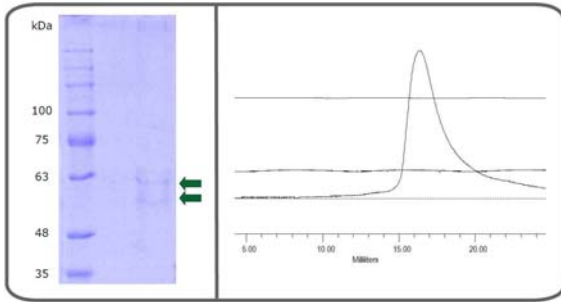
Product	Catalog No.	Package size
GLP1R protein (10 µg)	KT28201-10	1 x 10 µg
GLP1R protein (50 µg)	KT28201-50	5 x 10 µg

### Product Description

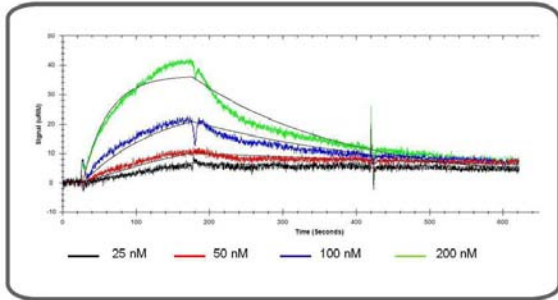
Alternative names	GLP1-receptor
UniProt number	P43220
Protein class	GPCR, class B
Organism	Human (Homo sapiens)
Sequence	Full-length, wildtype sequence <u>N-terminal</u> HAtag (underlined), C-terminal 10x His-tag in red, HRV 3C protease site in blue, spacer in bold grey, Rho1D4 tag in bold green
	MKTIIALS <sup>Y</sup> IFCLVFAR <sup>P</sup> QGATVSLWETVQKWREYRRQCQRSLTEDPPPATDLFCNRTFDEYACWPD GEPGSFVN <sup>V</sup> SCPWYLPWASSVPQGHVYRFCTA <sup>E</sup> GLWLQKDNSSL <sup>P</sup> WRDLSECEESKRGERS <sup>S</sup> SPEE QLLFLYII <sup>Y</sup> TVGYALSFSALVIASAILL <sup>G</sup> FRHLHCTRNYIHLNLFASFIL <sup>R</sup> ALS <sup>V</sup> FIKDAALKW <sup>M</sup> YSTAAQ QH <sup>Q</sup> WDG <sup>L</sup> LSYQ <sup>D</sup> SLSC <sup>R</sup> LVFL <sup>L</sup> MQYCVA <sup>A</sup> ANYWLLVEGV <sup>Y</sup> LYTLLAFSVLSE <sup>Q</sup> WIFR <sup>L</sup> YV <sup>S</sup> IGW <sup>G</sup> VP LLFVVPW <sup>G</sup> IVK <sup>Y</sup> LYE <sup>D</sup> E <sup>G</sup> CVTRNSNM <sup>N</sup> YWL <sup>I</sup> IRLPILFAIGV <sup>N</sup> FLIFVRVICIV <sup>V</sup> SKLKANLMCKTD <sup>I</sup> KC RLAKSTLTLI <sup>P</sup> LLGT <sup>H</sup> EVIFAFVMDEHARGTLRFIKL <sup>F</sup> TELSFTSFQGLMVAIL <sup>Y</sup> CFV <sup>N</sup> NEVQL <sup>E</sup> FRK <sup>S</sup> W ERWRLEHLHI <sup>Q</sup> RDSSMKPLK <sup>C</sup> PTSSLSSGATAGSSMYTATCQ <sup>A</sup> SCS <sup>G</sup> GGHHHHHHHHHH <sup>H</sup> LEVL <sup>F</sup> Q <sup>G</sup> PGSSGTETSQVAPA
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 (Kd) was determined to be 6.11 x 10 <sup>-7</sup> 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

For In-Vitro Diagnostic Use. Not For Human Or Animal Consumption.