

## GPR37 Protein, Human, Recombinant (His)

### General Information

Synonyms:	hET(B)R-LP;PAELR;G protein-coupled receptor 37 (endothelin receptor type B-like);EDNRBL
Protein Construction:	A DNA sequence encoding the human GPR37 (NP_005293.1) the first extracellular domain (Met 1-Met 265) was fused with a polyhistidine tag at the C-terminus. Predicted N terminal: Ala 27
Species:	Human
Expression Host:	HEK293 Cells
Accession:	O15354
Molecular Weight:	26.6 kDa (predicted); 30-45 kDa (reducing condition, due to glycosylation)

### QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 80 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

### Preparation and Storage

#### Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

#### Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

#### Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

### Protein Background

GPR37 (cathepsin Z) is an orphan receptor that belongs to the G-protein coupled receptor 1 family. G protein-coupled receptors are a large protein family comprised of transmembrane receptors that sense molecules outside the cell and activate inside signal transduction pathways and, ultimately, cellular responses. They only exist in eukaryotes, including yeast, choanoflagellates, and animals. These receptors are bonded and activated by light-

sensitive compounds, odors, pheromones, hormones, and neurotransmitters. These ligands vary in size from small molecules to peptides to large proteins. G protein-coupled receptors are involved in many diseases and are also the target of approximately 40% of all modern medicinal drugs. GPR37 is expressed in the brain and spinal cord, and at lower levels in the testis, placenta, and liver, but no detectable expression is observed in any other tissue. GPR37 may have a unique functional role in the central nervous system.

### Reference

Marazziti D, et al. (1997) Cloning of GPR37, a gene located on chromosome 7 encoding a putative G-protein-coupled peptide receptor, from a human frontal brain EST library. *Genomics*. 45(1):68-77.

Discovery of novel inhibitors of dengue viral RNA-dependent RNA polymerase by molecular docking, in vitro assay, DFT, and MD simulations

Imai, et al. (2002) CHIP is associated with Parkin, a gene responsible for familial Parkinson's disease, and enhances its ubiquitin ligase activity. *Mol Cell*. 10(1):55-67.

Imai, et al. (2001) An unfolded putative transmembrane polypeptide, which can lead to endoplasmic reticulum stress, is a substrate of Parkin. *Cell*. 105(7):891-902.

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Tel: 781-999-4286    E\_mail: info@targetmol.com    Address: 34 Washington Street, Wellesley Hills, MA 02481