Data Sheet (Cat.No.TMPY-02837)

TargetMol

GPR114 Protein, Human, Recombinant (hFc)

General Information

Synonyms:	PGR27;GPR114
Protein Construction:	A DNA sequence encoding the human GPR114 (Q8IZF4) (Met1-Gly184) was expressed, fused with the Fc region of human IgG1 at the C-terminus. Predicted N terminal: Glu 22
Species:	Human
Expression Host:	HEK293 Cells
Accession:	Q8IZF4
Molecular Weight:	45.6 kDa (predicted); 56-63 kDa (reducing conditions)

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:	> 94 % 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

GPR114 belongs to the G-protein coupled receptor 2 family. Members of this family share a common molecular architecture which consists of seven transmembrane domains, three extracellular loops, three intracellular loops, an amino-terminal extracellular domain, and an intracellular carboxyl terminus. It is thought that light acts as the activating stimulus of a G-protein-coupled receptor (GPCR). GPCRs are expected to have a molecular function (G-protein coupled receptor activity) and to localize in various compartments (endoplasmic reticulum membrane,

plasma membrane, integral to the membrane). Family B of the GPCRs is a small but structurally and functionally diverse group of proteins that includes receptors for polypeptide hormones, molecules thought to mediate intercellular interactions at the plasma membrane, and a group of Drosophila proteins that regulate stress responses and longevity. GPR114 contains 1 GPS domain. GPR114 gene has been proposed to participate in processes (G-protein coupled receptor protein signaling pathway, neuropeptide signaling pathway).

Reference

Ota T.,et al.,(2004), Complete sequencing and characterization of 21,243 full-length human cDNAs. Nat. Genet. 36: 40-45.

Bechtel S.,et al., (2007), The full-ORF clone resource of the German cDNA consortium.BMC Genomics 8:399-399.

Yu X., Harden K.,et al.,(2009), The surface protein TIGIT suppresses T cell activation by promoting the generation of mature immunoregulatory dendritic cells. Nat. Immunol. 10:48-57.