



LD Biopharma, Inc.
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- PRODUCT DATA SHEET -

Name of Product: Recombinant Human GPR114 Protein
Catalog Number: hRP-0598
Manufacturer: LD Biopharma, Inc.

Introduction

Human GPR114 protein is a member of adhesion GPCRs family. G protein-coupled receptors (GPCRs) belong to a diverse superfamily of membrane-bound receptors. The second largest subgroup of GPCRs, the Adhesion GPCRs, has 33 members in humans. Phylogenetic analysis of the entire repertoire of the seven transmembrane- domain (7TM) regions of GPCRs shows that the Adhesion GPCRs form a distinct family. Adhesion GPCRs are characterised by (1) *long N termini with multiple functional domains often found in other proteins such as tyrosine kinases, integrins and cadherins*, (2) highly complex genomic structure with multiple introns and splice variants and (3) a 7TM region that has no clear similarities with 7TM from other GPCRs. Several Adhesion GPCRs are known to play a role in the immune system but it is becoming more evident that many of them have important roles in the CNS. Function of human GPR114 currently is unknown.

Human GPR114 extracellular domain cDNA (22 - 250 aa, derived from BC032401) was constructed with codon optimization and expressed with a small T7-His-TEV cleavage site Tag (29aa) fusion at its N-terminal and expressed in E.coli as inclusion bodies. The final product was refolded using our unique “temperature shift inclusion body refolding” technology and chromatographically purified.

Gene Symbol: GPR114 (GRP27)
Accession Number: NP_722579
Species: Human
Size: 50 µg / Vial
Composition: 0.5 mg/ml, sterile-filtered, in 20 mM pH 8.0 Tris-HCl Buffer, with proprietary formulation of NaCl, KCl, EDTA, arginine, DTT and Glycerol.
Storage: In Liquid. Keep at -80°C for long term storage. Product is stable at 4 °C for at least 30 days.



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Key References

Fredriksson,R., et al., *Novel human G protein-coupled receptors with long N-terminals containing GPS domains and Ser/Thr-rich regions*. FEBS Lett. 531 (3), 407-414 (2002)

Bjarnadottir,T.K., et al., *The human and mouse repertoire of the adhesion family of G-protein-coupled receptors*. Genomics 84 (1), 23-33 (2004)

Applications

1. May be used as coating matrix protein or as soluble receptor for in vitro CPR114 functional and various cell differentiation regulations studies.
2. May be used for protein-protein interaction assay development.
3. As antigen for specific antibody production.

Quality Control

1. Purity: > 90% by SDS-PAGE.

Recombinant Protein Sequence

MASMTGGQQMGRGHHHHHGNLYFQGG EETWEELLSY MENMQVSRGRSSVFSSRQLHQLEQMLL
NTSFPGYNLTLQTPTIQSLAFKLSCDFSGLSLTSATLKRVPQAGGQHARGQHAMQFPAELTRDA
CKTRPRELRLICIFYSNTHFFK DENNSSLLNNYVLGAQLSHGHVNNLRDPVNI SFWHNQSLEGY
TLTCVFWKEGARKQPWGGWSPEGCRTEQPSHSQVLCRCNHLTYFAVLMQLSPALVPAELLAPLT
Y