

Recombinant Human LRP8 Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP50636

Size: 10ug, 100ug

Protein Name: Low-density lipoprotein receptor-related protein 8 (LRP-8) (Apolipoprotein E receptor 2)

Synonym: LRP8, APOER2

UniProt ID: Q14114

UniProt Link: www.uniprot.org/uniprotkb/Q14114/entry

Species Source: Human

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 963 AA

Molecular Weight: 106 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MGLPEPGPLRLLALLLLLLLLLLLLLLLQLQHLAAAAADPLLGGQGPAKDCEKDQFQCRNERCIPSVWRCD
EDDDCLDHSDDEDDCPKKTCA DSDFTCDNGHCIHERWKCDGEEECPDGSDESEATCTKQVCPAEKL
SCGPTSHKCVPASWRCDGEKDCEGGADEAGCATLCAPHEFQCGNRSCLA AVFVCDGDDDCGDG
SDERGCADPACGPREFRCGGDGGGACIPERWVCDRQFD CEDRSDEAAELCGRPGPGATSAP AAC
ATASQFACRS GECVHLGWRC DGDRDCKDKSDEAD CPLGTCRGDEFQCGDGT CVLAIKHCNQE QD
CPDGSDEAGCLQGLNECLHNNGGCSHICTDLKIGFECTCPAGFQLLDQKTCGDIDECKDPDACSQIC
VNYKGYFKCECYPGYEMDLLTKNCKAAAGKSPSLIFTNRHEVRRIDL VKRNY SRLIPMLKNVVALDVE
VATNRIYWCDLSYRKIYSAYMDKASDPKEQEV LIDEQLHSPEGLAVDWVHKHIYWTD SGNKTISVAT
VDGGRRTLFSRNLSEPRAI AVDPLRGFMYSWSDWGDQAKIEK SGLNGVDRQTLVSDNIEWPNGITL
DLLSQRLYWVDSKLHQLSSIDFSGGNRKT LISSTDFLSHPFGI AVFEDKVFWDLENEAIF SANRLNG
LEISILAENLNNPHDIVIFHELKQPRAPDACELSVQPNGGCEYLCLPAPQISSHSPKYTCACPD TMWL
GPD MKRCYRAPQSTSTTTLASTMTRTVPATTRAPGTTVHRSTYQNHSTETPSLTA AVPSSVSV PRA
PSISPSTLSPATSNHSQH YANEDSKMGSTVTA AVIGIIVPIVIALLCMSGYLIWRNWK RKNTKSMNFD
NPVYRKTT EEEDEDELHIGRTAQIGHVYPAAISSFDRPLWAEPC LGETREPEDPAPALKE L FVLPGE P
RSQLHQLPKNPLSELPVVKSKRVALSLEDDGLP

3. Buffer Composition



Liquid format: PBS-based buffer containing 50% glycerol. Glycerol concentration can be customized upon customer request; please state special requirements when placing your order.

Lyophilized format: Buffer before lyophilization is PBS supplemented with 6% trehalose.

4. Storage Conditions

Upon receipt, store the product at -20 °C or -80 °C. Aliquot the product for on-demand use to preserve protein activity and prevent denaturation and inactivation caused by repeated freeze-thaw cycles.

5. Product Description

This product is recombinant Low-density lipoprotein receptor-related protein 8 (LRP-8) (Apolipoprotein E receptor 2) produced using the HEK293T eukaryotic cell expression system. It is suitable for in-vitro functional assays, protein-protein interaction studies, antibody preparation and other biomedical research applications.

Protein Function: Cell surface receptor for Reelin (RELN) and apolipoprotein E (apoE)-containing ligands (PubMed:12899622, PubMed:12950167, PubMed:20223215, PubMed:30873003). LRP8 participates in transmitting the extracellular Reelin signal to intracellular signaling processes, by binding to DAB1 on its cytoplasmic tail (By similarity). Reelin acts via both the VLDL receptor (VLDLR) and LRP8 to regulate DAB1 tyrosine phosphorylation and microtubule function in neurons (By similarity). LRP8 has higher affinity for Reelin than VLDLR (By similarity). LRP8 is thus a key component of the Reelin pathway which governs neuronal layering of the forebrain during embryonic brain development (By similarity). Binds the endoplasmic reticulum resident receptor-associated protein (RAP) (By similarity). Binds dimers of beta 2-glycoprotein I and may be involved in the suppression of platelet aggregation in the vasculature (PubMed:12807892). Highly expressed in the initial segment of the epididymis, where it affects the functional expression of clusterin and phospholipid hydroperoxide glutathione peroxidase (PHGPx), two proteins required for sperm maturation (By similarity). May also function as an endocytic receptor (By similarity). Not required for endocytic uptake of SEPP1 in the kidney which is mediated by LRP2 (By similarity). Together with its ligand, apolipoprotein E (apoE), may indirectly play a role in the suppression of the innate immune response by controlling the survival of myeloid-derived suppressor cells (By similarity).; (Microbial infection) Acts as a receptor for Semliki Forest virus.; (Microbial infection) Acts as a receptor for tick-borne encephalitis virus by mediating viral cell attachment and internalization.

Subcellular Localization: Cell membrane ; Single-pass type I membrane protein . Secreted .
Note=Isoforms that contain the exon coding for a furin-type cleavage site are proteolytically processed, leading to a secreted receptor fragment.

6. Notes

- Avoid repeated freeze-thaw cycles to maintain protein stability and biological activity.
- Please specify special buffer-composition requirements at the time of order placement.
- For research use only. Not intended for clinical diagnosis, therapeutic use or commercial manufacturing.