

DESCRIPTION

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|-------------------------------------|------------------------------------------------------------------|--------|-------------------------------------------|
| Source | Human embryonic kidney cell, HEK293-derived human LRP-10 protein | | |
| | Human LRP-10 (His17-Pro438) Accession # NP_054764.2 | IEGRMD | Human IgG ₁ (Pro100-Lys330) |
| | N-terminus | | C-terminus |
| N-terminal Sequence Analysis | His17 | | |
| Structure / Form | Disulfide-linked homodimer | | |
| Predicted Molecular Mass | 72 kDa | | |

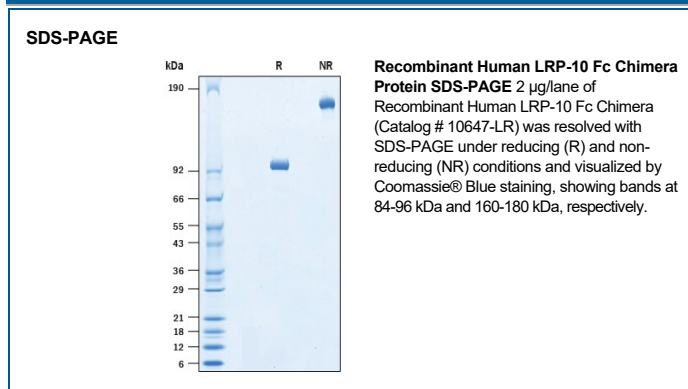
SPECIFICATIONS

| | |
|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| SDS-PAGE | 84-96 kDa, under reducing conditions |
| Activity | Measured by its binding ability in a functional ELISA. When Recombinant Human LRPAP (Catalog # 4296-LR) is immobilized at 5 µg/mL (100 µL/well), Recombinant Human LRP-10 Fc Chimera (Catalog # 10647-LR) binds with an ED ₅₀ of 12-60 µg/mL. |
| Endotoxin Level | <0.10 EU per 1 µg of the protein by the LAL method. |
| Purity | >90%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining. |
| Formulation | Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. |

PREPARATION AND STORAGE

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|--------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Reconstitution | Reconstitute at 500 µg/mL in PBS. |
| Shipping | The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. |
| Stability & Storage | <p>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</p> <ul style="list-style-type: none"> • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 3 months, -20 to -70 °C under sterile conditions after reconstitution. |

DATA



BACKGROUND

LRP-10 (Low-density lipoprotein receptor-related protein 10) is a member of the new subfamily of low-density lipoprotein receptor (LDLR) family that includes two other receptors LRP-3 and LRP-12 (1). It is called LRP-9 in the mice. This unique family is characterized by extracellular CUB domains and large cytoplasmic tails containing acidic dileucine (DXXLL) motifs (2). Mature human LRP-10 consists of a 424 amino acid (aa) extracellular domain (ECD), a 21 aa transmembrane segment, and a 252 aa cytoplasmic domain. The ECD contains 4 LDLR-A domains and 2 CUB domains. Within the ECD, human LRP-10 shares 90% aa sequence identity with mouse and rat LRP-10. LRP-10 is expressed in various tissues including brain and may be involved in apolipoprotein internalization (3). It is also localized in Trans-Golgi network (TGN) and endosomes (2,4). LRP-10 is also identified as a novel sorting receptor for Amyloid precursor protein (APP) and a decrease in LRP-10 function contributes to the pathogenesis of Alzheimer's disease (5).

References:

1. Battle, M. A. *et al.* (2003) *Biochemistry*. **42**:7270.
2. Boucher, R. *et al.* (2008) *Histochem. Cell. Biol.* **130**:315.
3. Sugiyama, T. *et al.* (2000) *Biochemistry*. **39**:15817.
4. Doray, B. *et al.* (2008) *Traffic*. **9**:1551.
5. Brodeur, J. *et al.* (2012) *Mol. Neurodegener.* **7**:31.