

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human LRP-1 Cluster II in direct ELISAs and Western blots. In direct ELISAs, less than 2% cross-reactivity with recombinant human (rh) CRP-6 and rhMegalyn-C4 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human LRP-1 Cluster II Arg786-Leu1165 Accession # Q07954
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS.

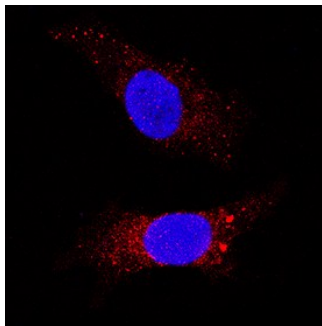
APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

	Recommended Concentration	Sample
Western Blot	0.1 µg/mL	Recombinant Human LRP-1 Cluster II Fc Chimera (Catalog # 2368-L2)
Immunocytochemistry	3-15 µg/mL	See Below
Immunohistochemistry	3-15 µg/mL	See Below

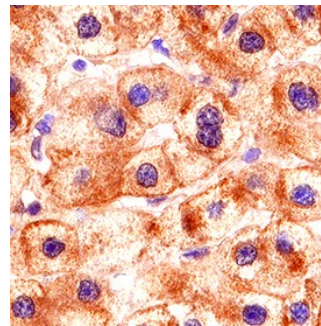
DATA

Immunocytochemistry



LRP-1 Cluster II in HepG2 Human Cell Line. LRP-1 Cluster II was detected in immersion fixed HepG2 human hepatocellular carcinoma cell line using Goat Anti-Human LRP-1 Cluster II Antigen Affinity-purified Polyclonal Antibody (Catalog # AF2368) at 3 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Goat IgG Secondary Antibody (red; Catalog # NL001) and counterstained with DAPI (blue). Specific staining was localized to cytoplasm and nuclei. View our protocol for [Fluorescent ICC Staining of Cells on Coverslips](#).

Immunohistochemistry



LRP-1 Cluster II in Human Liver. LRP-1 Cluster II was detected in immersion fixed paraffin-embedded sections of human liver using Goat Anti-Human LRP-1 Cluster II Antigen Affinity-purified Polyclonal Antibody (Catalog # AF2368) at 3 µg/mL for 1 hour at room temperature followed by incubation with the Anti-Goat IgG VisUCyte™ HRP Polymer Antibody (Catalog # VC004). Tissue was stained using DAB (brown) and counterstained with hematoxylin (blue). Specific staining was localized to cell membranes and cytoplasm. View our protocol for [IHC Staining with VisUCyte HRP Polymer Detection Reagents](#).

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <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. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

LDL receptor-related protein 1 (LRP-1), also known as CD91 and the α 2-macroglobulin receptor, is a type I transmembrane protein in the LDL receptor superfamily. It is expressed on neurons, hepatocytes, adipocytes, vascular smooth muscle cells, fibroblasts, keratinocytes, macrophages, and megakaryocytes. LRP-1 is important for the clearance of a large number of circulating molecules involved in fatty acid metabolism and the inhibition of serine proteases (1-4). LRP-1 also associates, or through intracellular scaffold proteins, with other membrane associated proteins on the same cell. This allows LRP-1 to modulate the activity or internalization of PDGF R β , NMDA receptor subunits, TGF- β receptors, Frizzled-1, various integrins, and the prion protein PrP^C (1, 5-10). Human LRP-1 is N glycosylated and sialylated, and cleaved in the Golgi to produce an 85 kDa transmembrane beta chain, and a 515 kDa alpha chain. Both associate noncovalently, with the beta chain remaining completely extracellular (11, 12). The alpha chain of LRP 1 contains 31 LDLR class A repeats, 34 LDLR class B repeats, and 22 EGF-like repeats (13). The LDLR domains are clustered in four regions throughout the protein (13). Cluster II (aa 786 - 1165) contains one EGF-like and eight LDLR class A repeats (14, 15). Cluster II contains binding sites for Apolipoprotein E, LPL, LRPAP/RAP, alpha 2 Macroglobulin, Coagulation Factor VIII light chain, Lactoferrin, PAI-1, tPA-PAI-1 complexes, Pro-uPA, and TFPI (14, 15). Within this region, human LRP-1 shares 99% aa sequence identity with mouse and rat LRP-1. A shed soluble form of LRP-1 circulates in the serum and retains ligand binding properties (16).

References:

1. Lillis, A.P. *et al.* (2008) *Physiol. Rev.* **88**:887.
2. Galliano, M.-F. *et al.* (2008) *PLoS ONE* **3**:e2729.
3. Bouchard, B.A. *et al.* (2007) *J. Thromb. Haemost.* **6**:638.
4. Sendra, J. *et al.* (2008) *Cardiovasc. Res.* **78**:581.
5. Takayama, Y. *et al.* (2005) *J. Biol. Chem.* **280**:18504.
6. Martin, A.M. *et al.* (2008) *J. Biol. Chem.* **283**:12004.
7. Cabello-Verugio, C. and E. Brandan (2007) *J. Biol. Chem.* **282**:18842.
8. Zilberberg, A. *et al.* (2004) *J. Biol. Chem.* **279**:17535.
9. Taylor, D.R. and N.M. Hooper (2007) *Biochem. J.* **402**:17.
10. Parkyn, C.J. *et al.* (2007) *J. Cell Sci.* **121**:773.
11. Herz, J. *et al.* (1990) *EMBO J.* **9**:1769.
12. Strickland, D.K. *et al.* (1990) *J. Biol. Chem.* **265**:17401.
13. Herz, J. *et al.* (1988) *EMBO J.* **7**:4119.
14. Horn, I.R. *et al.* (1997) *J. Biol. Chem.* **272**:13608.
15. Neels, J.G. *et al.* (1999) *J. Biol. Chem.* **274**:31305.
16. Quinn, K.A. *et al.* (1999) *Exp. Cell Res.* **251**:433.