

## DESCRIPTION

<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human LRP-1 Cluster III in direct ELISAs. In direct ELISAs, less than 1% cross-reactivity with recombinant human LRP-1 Cluster II is observed.
<b>Source</b>	Polyclonal Sheep IgG
<b>Purification</b>	Antigen Affinity-purified
<b>Immunogen</b>	Chinese hamster ovary cell line CHO-derived human LRP-1 Cluster III Ser2522-Ile2941 Accession # Q07954
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

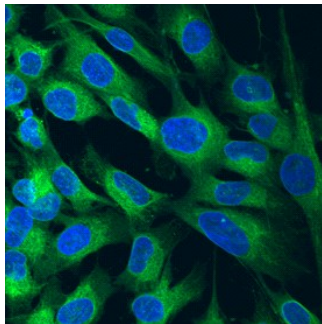
## APPLICATIONS

**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.

	<b>Recommended Concentration</b>	<b>Sample</b>
<b>Immunocytochemistry</b>	5-15 µg/mL	See Below

## DATA

### Immunocytochemistry



**LRP-1 Cluster III in MG-63 Human Cell Line.** LRP-1 Cluster III was detected in immersion fixed MG-63 human osteosarcoma cell line using Sheep Anti-Human LRP-1 Cluster III Antigen Affinity-purified Polyclonal Antibody (Catalog # AF4824) at 10 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 493-conjugated Anti-Sheep IgG Secondary Antibody (green; Catalog # NL012) and counterstained with DAPI (blue). Specific staining was localized to cytoplasm. View our protocol for [Fluorescent ICC Staining of Cells on Coverslips](#).

## PREPARATION AND STORAGE

<b>Reconstitution</b>	Reconstitute at 0.2 mg/mL in sterile PBS.
<b>Shipping</b>	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
<b>Stability &amp; Storage</b>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"> <li>● 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>● 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

**BACKGROUND**

LDL receptor-related protein 1 (LRP-1), also known as CD91 and the  $\alpha$ 2-macroglobulin receptor, is a type I membrane 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 complexes of serine proteases with their inhibitors (1-4). LRP-1 also associates directly 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 $\beta$ , NMDA receptor subunits, TGF- $\beta$  receptors, Frizzled-1, various integrins, and the prion protein PrP<sup>C</sup> (1, 5-10). Human LRP-1 is an N-glycosylated and sialylated molecule that is cleaved in the Golgi to produce an 85 kDa transmembrane  $\beta$  chain and a 515 kDa  $\alpha$  chain that associates noncovalently with the  $\beta$  chain but does not itself cross the membrane (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). LRP-1 Cluster III (aa 2522-2941) contains ten LDLR-A cysteine-rich domains (14). Within this region, human LRP-1 shares 97% aa sequence identity with mouse and rat LRP-1. A soluble form of LRP-1 is shed into the serum and cerebrospinal fluid and retains ligand binding properties (15, 16). LRP-1 Cluster III contains binding sites for LRPAP/RAP (14).

**References:**

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