

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human LRP-4 in direct ELISAs and Western blots. In direct ELISAs and Western blots, no cross-reactivity with recombinant human (rh) LRP-5 or rhLRP-6 is observed.
Source	Monoclonal Mouse IgG ₁ Clone # 741704
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	<i>E. coli</i> -derived recombinant human LRP-4 Gly18-Ser344 Accession # O75096
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	2 µg/mL	See Below
Immunohistochemistry	8-25 µg/mL	See Below

DATA

Western Blot

Detection of Human and Rat LRP-4 by Western Blot.
Western blot shows lysates of rat embryonic cortical glial cells and human brain (cortex) tissue. PVDF membrane was probed with 2 µg/mL of Mouse Anti-Human LRP-4 Monoclonal Antibody (Catalog # MAB5948) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF007). A specific band was detected for LRP-4 at approximately 220 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

Immunohistochemistry

LRP-4 in Human Brain. LRP-4 was detected in immersion fixed paraffin-embedded sections of human brain (medulla) using Mouse Anti-Human LRP-4 Monoclonal Antibody (Catalog # MAB5948) at 15 µg/mL overnight at 4 °C. Before incubation with the primary antibody, tissue was subjected to heat-induced epitope retrieval using Antigen Retrieval Reagent-Basic (Catalog # Catalog # CTS013). Tissue was stained using the Anti-Mouse HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # Catalog # CTS002) and counter-stained with hematoxylin (blue). Specific staining was localized to cytoplasm of neurons. View our protocol for [Chromogenic IHC Staining of Paraffin-embedded Tissue Sections](#).

PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.5 mg/mL. For liquid material, refer to CoA for concentration.
Shipping	Lyophilized product is shipped at ambient temperature. Liquid small pack size (-SP) is shipped with polar packs. Upon receipt, store immediately at the temperature recommended below.
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

LRP-4 (Low density lipoprotein-related protein #4; also MEGF7 and LRP13) is a 220-270 kDa glycoprotein, member of the LDLR family of proteins. It is expressed on neurons, oocytes, spermatogonia and skeletal muscle cells and binds multiple ligands including WISE, apoE, MuSK and neuronal Agrin. It serves to negatively regulate Wnt signaling during development and to cluster AChRs at neuromuscular junctions. Mature human LRP-4 is an 1885 amino acid (aa) type I transmembrane glycoprotein. It contains a 1705 aa extracellular domain (ECD) (aa 21-1725) plus a 159 aa cytoplasmic region (aa 1747-1905). In the ECD, there are eight LDLR class A repeats (aa 26-350), two EGF-like repeats (aa 354-434) and 20 LDLR class B repeats that contain an intervening EGF-like domain (aa 480-1610). Over aa 18-344, human LRP-4 shares 97% aa identity with both mouse and rat LRP-4. MAB5948 detects the correct rat band in Western Blot. Immunohistochemistry was not tested in rat samples.