Mouse LRP-6 Alexa Fluor® 488-conjugated Antibody

Monoclonal Rat IgG_{2B} Clone # 290913

Catalog Number: FAB2960G

100 µg

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse LRP-6 in direct ELISAs and Western blots. In direct ELISAs, this antibody shows approximately 50 - 60% cross-reactivity with recombinant human (rh) LRP-6 and no cross-reactivity with rhLDL R.
Source	Monoclonal Rat IgG_{2B} Clone # 290913
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Chinese hamster ovary cell line CHO-derived recombinant mouse LRP-6 Met1-Pro1368 Accession # O88572
Conjugate	Alexa Fluor 488 Excitation Wavelength: 488 nm Emission Wavelength: 515-545 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

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.*

Western Blot	Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

BACKGROUND

The low-density lipoprotein (LDL) receptor-related protein 5 (LRP-5) and LRP-6 constitute a distinct subgroup of the LDL receptor family (1). Both LRP-5 and LRP-6 are type I transmembrane proteins that function as Wnt co-receptors with Frizzled proteins (FZD) (2, 3, 4). The mouse LRP-6 cDNA encodes a 1613 amino acid (aa) residue precursor including a 19 aa signal sequence, 1351 aa extracellular domain (ECD), a 23 aa transmembrane (TM) segment, and a 20 aa cytoplasmic domain (5). The ECD contains 20 YWTD motif-containing LDLR-B domains, fourEGF-like repeats, and three cysteine-rich LDLR-A repeats. The ECD of mouse LRP-6 shares 71% aa sequence identity with the ECD of mouse LRP-5 and 98% aa sequence identity with the ECD of human, rat, and canine LRP-6. The intracellular region of LRP-6 contains repeated PPPSP motifs. When the Ser/Thr in these motifs are phosphorylated, LRP-6 can interact with Axin and propagate canonical Wnt signal transduction (6, 7). LRP-6 forms inactive homodimers *via* its YWTD-EGF domains (8). Wnt binding to FZD and subsequent association with LRP-6 lead to activating conformational changes in LRP-6 cytoplasmic domains (8). LRP-6 can also interact directly with the Dickkopf (Dkk), sclerostin, and Wise proteins which are modulators of Wnt signaling (9 - 14). Formation of a ternary complex of LRP-6, Dkk-1, and Kremen triggers the internalization of the complex and removal LRP-6 from the cell surface. LRP-5 and LRP-6 share overlapping functions in diverse embryonic developmental processes (15).

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