

#3395 Store at -20°C

LRP6 (C47E12) Rabbit mAb


Cell Signaling
TECHNOLOGY®

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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
WB, IP	H M	Endogenous	180, 210	Rabbit IgG	#O75581	4040

Product Usage Information

Application

Western Blotting
Immunoprecipitation

Dilution

1:1000
1:50

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

Specificity / Sensitivity

LRP6 (C47E12) Rabbit mAb detects endogenous levels of total LRP6 protein.

Species predicted to react based on 100% sequence homology:

Rat

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to an extracellular region surrounding Met988 of human LRP6 protein.

Background

LRP5 and LRP6 are single-pass transmembrane proteins belonging to the low-density lipoprotein receptor (LDLR)-related protein family. Unlike other members of the LDLR family, LRP5 and LRP6 have four EGF and three LDLR repeats in the extracellular domain, and proline-rich motifs in the cytoplasmic domain (1). They function as co-receptors for Wnt and are required for the canonical Wnt/β-catenin signaling pathway (2,3). LRP5 and LRP6 are highly homologous and have redundant roles during development (4,5). The activity of LRP5 and LRP6 can be inhibited by the binding of some members of the Dickkopf (DKK) family of proteins (6,7). Upon stimulation with Wnt, LRP6 is phosphorylated at multiple sites including Thr1479, Ser1490, and Thr1493 by kinases such as GSK-3 and CK1 (8-10). Phosphorylated LRP6 recruits axin to the membrane and presumably activates β-catenin signaling (8-10).

Background References

1. Brown, S.D. et al. (1998) *Biochem. Biophys. Res. Commun.* 248, 879-888.
2. Pinson, K.I. et al. (2000) *Nature* 407, 535-538.
3. Tamai, K. et al. (2000) *Nature* 407, 530-535.
4. Kelly, O.G. et al. (2004) *Development* 131, 2803-2815.
5. He, X. et al. (2004) *Development* 131, 1663-1677.
6. Semenov, M.V. et al. (2001) *Curr Biol* 11, 951-61.
7. Bafico, A. et al. (2001) *Nat. Cell Biol.* 3, 683-668.
8. Tamai, K. et al. (2004) *Mol. Cell* 13, 149-156.
9. Zeng, X. et al. (2005) *Nature* 438, 873-877.
10. Davidson, G. et al. (2005) *Nature* 438, 867-872.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

WB: Western Blotting **IP:** Immunoprecipitation

Cross-Reactivity Key

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Mi:** mink **C:** chicken **Dm:** D. melanogaster
X: Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Sc:** S. cerevisiae **Ce:** C. elegans **Hr:** horse
GP: Guinea Pig **Rab:** rabbit **All:** all species expected

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