

Product Information

Anti-LRP1B (C-terminal region)

produced in rabbit, affinity isolated antibody

Catalog Number **SAB4200326**

Product Description

Anti-LRP1B (C-terminal region) is produced in rabbit using as immunogen a synthetic peptide corresponding to a sequence near the C-terminus of human LRP1B (GeneID: 53353), conjugated to KLH. The corresponding sequence is identical in mouse LRP1B. The antibody is affinity-purified using the immunizing peptide immobilized on agarose.

Anti-LRP1B (C-terminal region) specifically recognizes human, mouse and rat LRP1B. The antibody may be used in several immunochemical techniques including immunoblotting (human LRP1B ~200 kDa, mouse and rat LRP1B ~190 kDa), immunoprecipitation and immunofluorescence. An additional band of ~85 kDa corresponding to cleaved LRP1B may be observed in some cell extracts. Detection of the LRP1B band by immunoblotting is specifically inhibited by the LRP1B immunizing peptide.

LRP1B (also known as LRP-DIT), belongs to the low density lipoprotein (LDL) receptor gene family, including LDLR, LRP5 (low density lipoprotein related proteins), megalin/GP330, VLDLR (very low density lipoprotein receptor) and ApoER2. These receptors play a wide variety of roles in normal cell function and development due to their interactions with multiple ligands.¹ LRP1B is a candidate tumor suppressor gene, that is inactivated in several types of human malignancies, including non-small cell lung cancer (NSCLC), and thus plays an important role in tumorigenesis.² LRP1B undergoes intramembrane cleavage by γ -secretase, resulting in the release of the intracellular domain (ICD) that translocates to the nucleus.³ It has been suggested that the tumor suppressor function of LRP1B is mediated by proteolytic processing of the receptor resulting in ICD release. LRP1B has been shown to regulate the endocytic trafficking of the β -amyloid precursor protein (APP), and to reduce the production of amyloid- β peptide (A β) involved in the pathogenesis of Alzheimer's disease.⁴ LRP1B also regulates the degradation of the platelet derived growth factor- β receptor (PDGFR- β), influencing the migration of smooth muscle cells, thereby implicating LRP1B in the development of atherosclerosis.⁵

Reagent

Supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide as a preservative.

Antibody Concentration: ~1.5 mg/mL

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

For continuous use, store at 2-8 °C for up to one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing, or storage in "frost-free" freezers, is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilutions should be discarded if not used within 12 hours.

Product Profile

Immunoblotting: a working concentration of 1.5-3.0 μ g/mL is recommended using extracts of rat brain (S1 fraction) and mouse brain (S1 fraction).

Immunoprecipitation: a working amount of 5-10 μ g is recommended using extracts of HEK-293T cells over-expressing human LRP1B.

Immunofluorescence: a working concentration of 1-2 μ g/mL is recommended using HEK-293T cells over-expressing human LRP1B.

Note: In order to obtain the best results using various techniques and preparations, we recommend determining the optimal working dilutions by titration.

References

1. Bu, G., *Nature Rev. Neurosci.*, **10**, 333-344 (2009).
2. Liu, C.X., et al., *J. Biol. Chem.*, **276**, 28889-28896 (2001).
3. Liu, C.X., et al., *J. Biol. Chem.*, **282**, 7504-7511 (2007).

4. Cam, J.A., et al., *J. Biol. Chem.*, **279**, 29639-29646 (2004).

5. Seki, N., et al., *Biochem. Biophys. Res. Commun.*, **331**, 964-970 (2005).

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