SANTA CRUZ BIOTECHNOLOGY, INC.

LRP1 (A2MRα-2): sc-19616

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Members of the LDL receptor gene family, including LDLR (low density lipoprotein receptor), LEP1 (low density lipoprotein related protein), Megalin (also designated GP330), VLDLR (very low density lipoprotein receptor) and apoER2, are characterized by a cluster of cysteine-rich class A repeats, epidermal growth factor (EGF)-like repeats, YWTD repeats and an O-linked sugar domain. LRP1, also designated LRP and α-2-Macroglobulin receptor, is an endocytic receptor that mediates the uptake of at least 15 ligands, including α-2-Macroglobulin and apoE. LRP1 is cleaved into a membrane subunit and an extracellular subunit, which remain non-covalently associated. Proper folding and trafficking of LRP1 is facilitated by the receptor-associated protein (RAP), a molecular chaperone. The uptake of all known ligands through LRP1 can be blocked by RAP, which induces a conformational change in the receptor that renders it unable to bind ligands. LRP1, which is expressed in brain, liver and lung, is also implicated in Alzheimer's disease (AD), as the human LRP gene localizes to a potential AD locus on chromosome 12q13.3.

CHROMOSOMAL LOCATION

Genetic locus: LRP1 (human) mapping to 12q13.3.

SOURCE

LRP1 (A2MRα-2) is a mouse monoclonal antibody raised against LRP1 purified from placenta of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

LRP1 (A2MRα-2) is available conjugated to either phycoerythrin (sc-19616 PE) or fluorescein (sc-19616 FITC), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM.

APPLICATIONS

LRP1 (A2MRα-2) is recommended for detection of LRP1 of human origin by immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 µg per 1 x 10^6 cells).

Suitable for use as control antibody for LRP1 siRNA (h): sc-40101, LRP1 shRNA Plasmid (h): sc-40101-SH and LRP1 shRNA (h) Lentiviral Particles: sc-40101-V.

Molecular Weight of LRP1: 85/515/600 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227.

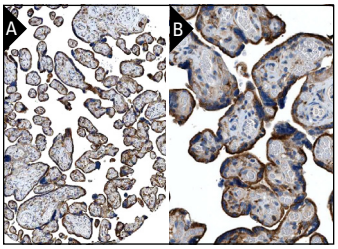
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 2) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

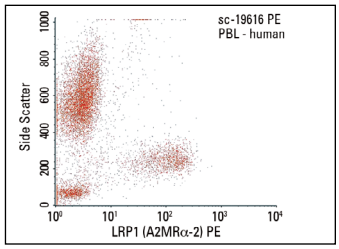
STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA



LRP1 (A2MRα-2): sc-19616. Immunoperoxidase staining of formalin fixed, paraffin-embedded human placenta tissue showing cytoplasmic and membrane staining of decidual and trophoblastic cells at low (**A**) and high (**B**) magnification. Kindly provided by The Swedish Human Protein Atlas (HPA) program.



LRP1 (A2MRα-2) PE: sc-19616 PE. FCM analysis of human peripheral blood leukocytes.

SELECT PRODUCT CITATIONS

1. Tanaga, K., et al. 2004. LRP1B attenuates the migration of smooth muscle cells by reducing membrane localization of urokinase and PDGF receptors. Arterioscler. Thromb. Vasc. Biol. 24: 1422-1428.
2. Li, S.S., et al. 2006. Endogenous Thrombospondin 1 is a cell-surface ligand for regulation of integrin-dependent T-lymphocyte adhesion. Blood 108: 3112-3120.
3. Liu, Z., et al. 2009. A CD26-controlled cell surface cascade for regulation of T cell motility and chemokine signals. J. Immunol. 183: 3616-3624.
4. Bergström, S.E., et al. 2013. A cytokine-controlled mechanism for integrated regulation of T-lymphocyte motility, adhesion and activation. Immunology 140: 441-455.
5. Bergström, S.E., et al. 2015. Antigen-induced regulation of T-cell motility, interaction with antigen-presenting cells and activation through endogenous thrombospondin-1 and its receptors. Immunology 144: 687-703.
6. Talme, T., et al. 2016. Methotrexate and its therapeutic antagonists caffeine and theophylline, target a motogenic T-cell mechanism driven by Thrombospondin-1 (TSP-1). Eur. J. Immunol. 46: 1279-1290.
7. Panezai, J., et al. 2017. T-cell regulation through a basic suppressive mechanism targeting low-density lipoprotein receptor-related protein 1. Immunology 152: 308-327.
8. Hudák, A., et al. 2021. The interplay of apoes with syndecans in influencing key cellular events of amyloid pathology. Int. J. Mol. Sci. 22: 7070.

RESEARCH USE

For research use only, not for use in diagnostic procedures.