

megalin (H-245): sc-25470

BACKGROUND

Members of the LDL receptor gene family, including LDLR (low density lipoprotein receptor), LRP (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. Megalin is expressed on the apical membrane domain of epithelial cells, including proximal kidney tubules, intestine and ependymal cells. Proper folding and trafficking of megalin is facilitated by the receptor-associated protein (RAP), a molecular chaperone that can block the uptake of all known ligands for megalin. Specifically, megalin mediates the uptake of apolipoprotein J (apoJ, also designated clusterin), which is a binding protein for the β -amyloid peptide, a peptide implicated in Alzheimer's disease. Megalin is also an antigenic determinant for Heymann nephritis in rats and may be important in the reabsorption of several molecules, including vitamin B12, in the kidney.

CHROMOSOMAL LOCATION

Genetic locus: LRP2 (human) mapping to 2q31.1; Lrp2 (mouse) mapping to 2 C2.

SOURCE

megalin (H-245) is a rabbit polyclonal antibody raised against amino acids 4411-4655 of megalin of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Available as agarose conjugate for immunoprecipitation, sc-25470 AC, 500 μ g/0.25 ml agarose in 1 ml.

APPLICATIONS

megalin (H-245) is recommended for detection of megalin of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for megalin siRNA (h): sc-40103, megalin siRNA (m): sc-40104, megalin siRNA (r): sc-108041, megalin shRNA Plasmid (h): sc-40103-SH, megalin shRNA Plasmid (m): sc-40104-SH, megalin shRNA Plasmid (r): sc-108041-SH, megalin shRNA (h) Lentiviral Particles: sc-40103-V, megalin shRNA (m) Lentiviral Particles: sc-40104-V and megalin shRNA (r) Lentiviral Particles: sc-108041-V.

Molecular Weight of megalin: 600 kDa.

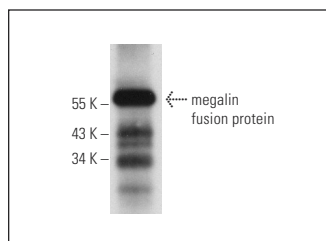
STORAGE

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

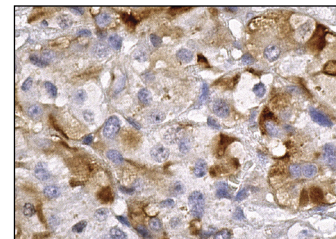
RESEARCH USE

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

DATA



megalin (H-245): sc-25470. Western blot analysis of human recombinant megalin fusion protein.



megalin (H-245): sc-25470. Immunoperoxidase staining of formalin fixed, paraffin-embedded human adrenal gland tissue showing cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Croucher, D., et al. 2006. The urokinase/PAI-2 complex: a new high affinity ligand for the endocytosis receptor low density lipoprotein receptor-related protein. *J. Biol. Chem.* 281: 10206-10213.
2. Luziga, C., et al. 2007. Gene expression and immunohistochemical localization of megalin in the anterior pituitary gland of helmeted guinea fowl (*Numida meleagris*). *J. Mol. Histol.* 38: 65-77.
3. Baumann, M. 2008. Renal Ne-carboxymethyllysine deposition after kidney transplantation. *Transplantation* 86: 330-335.
4. Gressner, O.A., et al. 2008. Gc-globulin (vitamin D binding protein) is synthesized and secreted by hepatocytes and internalized by hepatic stellate cells through Ca^{2+} -dependent interaction with the megalin/gp330 receptor. *Clin. Chim. Acta* 390: 28-37.
5. Girardi, A.C., et al. 2008. Dipeptidyl peptidase IV inhibition downregulates $\text{Na}^+\text{-H}^+$ exchanger NHE-3 in rat renal proximal tubule. *Am. J. Physiol. Renal Physiol.* 294: F414-F422.
6. Tsaroucha, A.K., et al. 2008. Megalin and cubilin in the human gallbladder epithelium. *Clin. Exp. Med.* 8: 165-170.
7. Pedersen, M.O., et al. 2010. Metallothionein-I + II and receptor megalin are altered in relation to oxidative stress in cerebral lymphomas. *Leuk. Lymphoma* 51: 314-328.
8. Prutskova, N.P. and Seliverstova, E.V. 2013. Absorption capacity of renal proximal tubular cells studied by combined injections of YFP and GFP in *Rana temporaria* L. *Comp. Biochem. Physiol. Part A Mol. Integr. Physiol.* 166: 138-146.

MONOS
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Try **megalin (G-9): sc-515750** or **megalin (H-10): sc-515772**, our highly recommended monoclonal alternatives to megalin (H-245).