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SLC11A1 Antibody (Center)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP8514C

Product Information

Application	WB, IF, E
Primary Accession	P49279
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB22005
Calculated MW	59872
Antigen Region	250-276

Additional Information

Gene ID	6556
Other Names	Natural resistance-associated macrophage protein 1, NRAMP 1, Solute carrier family 11 member 1, SLC11A1, LSH, NRAMP, NRAMP1
Target/Specificity	This SLC11A1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 250-276 amino acids from the Central region of human SLC11A1.
Dilution	WB~~1:1000 IF~~1:10~50 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	SLC11A1 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	SLC11A1 (HGNC:10907)
Function	Macrophage-specific antiporter that fluxes metal ions in either direction against a proton gradient. Localized to late endosomal lysosomal membranes, delivers bivalent cations from the cytosol into these acidic compartments where they may directly affect antimicrobial activity (PubMed:11237855).

	Involved in iron metabolism and host natural resistance to infection with intracellular parasites. Pathogen resistance involves sequestration of Fe(2+) and Mn(2+), cofactors of both prokaryotic and eukaryotic catalases and superoxide dismutases, not only to protect the macrophage against its own generation of reactive oxygen species, but to deny the cations to the pathogen for synthesis of its protective enzymes (Probable).
Cellular Location	Late endosome membrane; Multi-pass membrane protein. Lysosome membrane; Multi- pass membrane protein
Tissue Location	Macrophages; peripheral blood leukocytes, lung, spleen and liver.

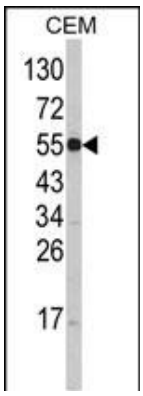
Background

NRAMP1, also known as SLC11A1, is a member of the solute carrier family 11 (proton-coupled divalent metal ion transporters) family and encodes a multi-pass membrane protein. The protein functions as a divalent transition metal (iron and manganese) transporter involved in iron metabolism and host resistance to certain pathogens. Mutations in this gene have been associated with susceptibility to infectious diseases such as leprosy and tuberculosis, and inflammatory diseases such as Crohn disease and rheumatoid arthritis. Alternatively spliced variants that encode different protein isoforms have been described but the full-length nature of only one has been determined.

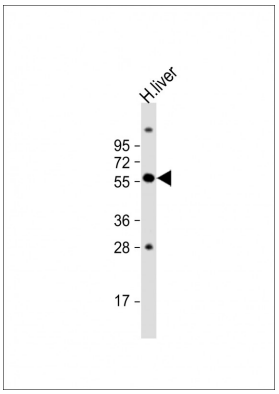
References

Jin,J., et.al., Zhongguo Dang Dai Er Ke Za Zhi 11 (4), 283-287 (2009)
Liu,J., et.al., Am. J. Hum. Genet. 56 (4), 845-853 (1995)

Images

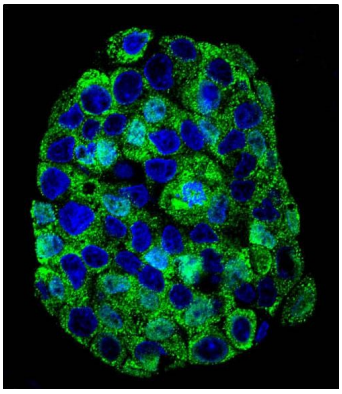


Western blot analysis of SLC11A1 Antibody (Center) (Cat. #AP8514c) in CEM cell line lysates (35ug/lane). SLC11A1 (arrow) was detected using the purified Pab.



Anti-SLC11A1 Antibody (Center) at 1:1000 dilution + human liver lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 60 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

Confocal immunofluorescent analysis of SLC11A1 Antibody (Center)(Cat#AP8514c) with HepG2 cell followed



by Alexa Fluor 488-conjugated goat anti-rabbit lgG (green). DAPI was used to stain the cell nuclear (blue).