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SLC30A1 Antibody (C-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP13972b

Product Information

Application	WB, E
Primary Accession	Q9Y6M5
Other Accession	Q4R6K2, NP_067017.2
Reactivity	Human
Predicted	Monkey, Rat, Canine, Rabbit
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB32560
Calculated MW	55300
Antigen Region	458-487

Additional Information

Gene ID	7779
Other Names	Zinc transporter 1, ZnT-1, Solute carrier family 30 member 1, SLC30A1, ZNT1
Target/Specificity	This SLC30A1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 458-487 amino acids from the C-terminal region of human SLC30A1.
Dilution	WB~~1:1000 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	SLC30A1 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	SLC30A1 (HGNC:11012)
Function	Zinc ion:proton antiporter that could function at the plasma membrane mediating zinc efflux from cells against its electrochemical gradient protecting them from intracellular zinc accumulation and toxicity (PubMed:31471319,

PubMed:33996761, PubMed:39422023, PubMed:39111308, PubMed:39390258). Alternatively, could prevent the transport to the plasma membrane of CACNB2, the L-type calcium channels regulatory subunit, through a yet to be defined mechanism. By modulating the expression of these channels at the plasma membrane, could prevent calcium and zinc influx into cells. By the same mechanism, could also prevent L-type calcium channels-mediated heavy metal influx into cells (By similarity). In some cells, could also function as a zinc ion:proton antiporter mediating zinc entry into the lumen of cytoplasmic vesicles. In macrophages, can increase zinc ions concentration into the lumen of cytoplasmic vesicles containing engulfed bacteria and could help inactivate them (PubMed:32441444). Forms a complex with TMC6/EVER1 and TMC8/EVER2 at the ER membrane of keratynocytes which facilitates zinc uptake into the ER (PubMed:18158319). Down-regulates the activity of transcription factors induced by zinc and cytokines (PubMed:18158319). Also functions as a copper transporter, facilitating the entry of copper into cells, which is crucial for copper-induced cell death (cuproptosis) (PubMed:39111308). Acts as a Zn(2+)/Ca(2+) exchanger, exporting zinc in exchange for calcium influx (PubMed:38669333).

Cellular Location

Cell membrane; Multi-pass membrane protein. Basolateral cell membrane; Multi-pass membrane protein. Cytoplasmic vesicle membrane; Multi-pass membrane protein. Cytoplasm. Endoplasmic reticulum membrane; Multi-pass membrane protein. Golgi apparatus membrane; Multi-pass membrane protein. Nucleus membrane; Multi-pass membrane protein. Postsynaptic density {ECO:0000250|UniProtKB:Q60738} Note=Localization to the plasma membrane is regulated by cellular zinc status. Recruitment to the plasma membrane from an internal pool is stimulated by zinc while in absence of zinc the plasma membrane pool is endocytosed and degraded (PubMed:31471319). Localizes to the basolateral surface of enterocytes (By similarity). Localizes to zinc- containing intracellular vesicles in macrophages (PubMed:32441444) Localizes in the cytoplasm and to the ER, Golgi and nucleus membranes in keratinocytes (PubMed:18158319). {ECO:0000250|UniProtKB:Q62720, ECO:0000269|PubMed:18158319, ECO:0000269|PubMed:31471319, ECO:0000269|PubMed:32441444}

Background

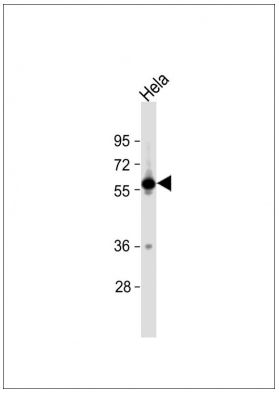
SLC30A1 may be involved in zinc transport out of the cell.

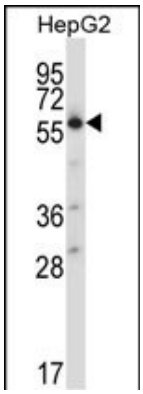
References

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Beharier, O., et al. Ann. N. Y. Acad. Sci. 1188, 87-95 (2010) :
Guey, L.T., et al. Eur. Urol. 57(2):283-292(2010)
Hosgood, H.D. III, et al. Respir Med 103(12):1866-1870(2009)
Levy, S., et al. J. Biol. Chem. 284(47):32434-32443(2009)

Images

Anti-SLC30A1 Antibody (C-term) at 1:1000 dilution + Hela whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 55 kDa Blocking/Dilution buffer: 5% NFDM/TBST.





SLC30A1 Antibody (C-term) (Cat. #AP13972b) western blot analysis in HepG2 cell line lysates (35ug/lane).This demonstrates the SLC30A1 antibody detected the SLC30A1 protein (arrow).

Citations

- Zinc transporters ZnT3 and ZnT6 are downregulated in the spinal cords of patients with sporadic amyotrophic lateral sclerosis.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.