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SLC30A1 Antibody

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP50851

Product Information

Application	WB
Primary Accession	Q9Y6M5
Reactivity	Human
Host	Rabbit
Clonality	polyclonal
Calculated MW	55300

Additional Information

Gene ID	7779
Other Names	Zinc transporter 1, ZnT-1, Solute carrier family 30 member 1, SLC30A1, ZNT1
Dilution	WB~~ 1:1000
Format	Rabbit IgG in phosphate buffered saline (without Mg2+ and Ca2+), pH 7.4, 150mM NaCl, 0.09% (W/V) sodium azide and 50% glycerol.
Storage Conditions	-20℃

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}

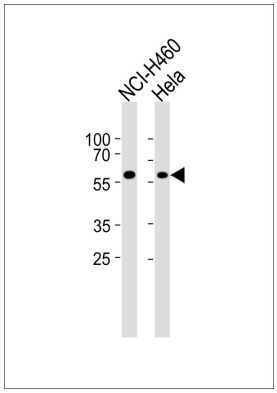
Background

May be involved in zinc transport out of the cell.

References

Nanji M.S.,et al.Submitted (NOV-2000) to the EMBL/GenBank/DDBJ databases.
Goshima N.,et al.Submitted (JUL-2008) to the EMBL/GenBank/DDBJ databases.
Mural R.J.,et al.Submitted (SEP-2005) to the EMBL/GenBank/DDBJ databases.
Inoue H.,et al.Submitted (FEB-1998) to the EMBL/GenBank/DDBJ databases.
Olsen J.V.,et al.Cell 127:635-648(2006).

Images



Western blot analysis of lysates from NCI-H460,Hela cell line (from left to right),using SLC30A1 Antibody, was diluted at 1:1000 at each lane. A goat anti-rabbit IgG H&L(HRP) at 1:5000 dilution was used as the secondary antibody.Lysates at 35ug per lane.

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