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SLC29A3 Antibody
Catalog # ASC11905

Specification

SLC29A3 Antibody - Product Information

Application	**WB, IHC, IF**
Primary Accession	Q9BZD2
Other Accession	NP_060814, 148596922
Reactivity	**Human, Mouse, Rat**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**IgG**
Calculated MW	**Predicted: 52 kDa** **Observed: 57 kDa KDa**
Application Notes	**SLC29A3 antibody can be used for detection of SLC29A3 by Western blot at 1 - 2 µg/mL. Antibody can also be used for immunohistochemistry starting at 5 µg/mL. For immunofluorescence start at 20 µg/mL.**

SLC29A3 Antibody - Additional Information

Gene ID **55315**

Target/Specificity
SLC29A3; SLC29A3 antibody is human, mouse and rat reactive. At least two isoforms of SLC29A3 are known to exist; this antibody will detect both isoforms. SLC29A3 antibody is predicted to not cross-react with other SLC29 proteins.

Reconstitution & Storage
SLC29A3 antibody can be stored at 4℃ for three months and -20℃, stable for up to one year.

Precautions
SLC29A3 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

SLC29A3 Antibody - Protein Information

Name SLC29A3 (HGNC:23096)

Synonyms ENT3

Function
Uniporter that mediates the facilitative transport of nucleoside across lysosomal and mitochondrial membranes (PubMed:15701636, PubMed:19164483, PubMed:20595384, PubMed:28729424). Functions as a non-electrogenic Na(+)-independent transporter

(PubMed:15701636, PubMed:19164483, PubMed:28729424). Substrate transport is pH-dependent and enhanced under acidic condition, probably reflecting the location of the transporter in acidic intracellular compartments (PubMed:15701636, PubMed:19164483, PubMed:28729424). Proton is not a cotransporting ion but most likely change the ionization state of the transporter which dictates transport- permissible/impermissible conformation for nucleoside translocation (PubMed:28729424). May direct the nucleoside transport from lysosomes to cytosol or cytosol to mitochondria to facilitate the fundamental function of salvage synthesis of nucleic acids (PubMed:28729424). Involved in the transport of nucleosides (adenosine, guanosine, uridine, thymidine, cytidine and inosine) and deoxynucleosides (deoxyadenosine, deoxycytidine) (PubMed:15701636, PubMed:19164483, PubMed:20595384, PubMed:28729424). Also mediates transport of purine nucleobases (adenine, guanine) and pyrimidine nucleobases (uracil) (PubMed:15701636, PubMed:19164483). Also able to transport monoamine neurotransmitters dopamine, serotonin, noradrenaline and tyramine (PubMed:19164483). Capable of transporting ATP (PubMed:19164483). Mediates nucleoside export from lysosomes in macrophages, which regulates macrophage functions and numbers (By similarity).

Cellular Location
Lysosome membrane; Multi-pass membrane protein. Late endosome membrane; Multi-pass membrane protein. Mitochondrion membrane; Multi-pass membrane protein. Cell membrane; Multi-pass membrane protein. Note=Observed in a punctate intracellular pattern showing partial colocalization with late endosomes/lysosomes (PubMed:15701636). Detected at the cell surface only in certain placental cells (PubMed:19164483)

Tissue Location
Widely expressed in both adult and fetal tissues (PubMed:15701636). Highest levels in placenta, uterus, ovary, spleen, lymph node and bone marrow (PubMed:15701636). Expressed in liver (PubMed:19164483). Lowest levels in brain and heart (PubMed:15701636) Expressed in macrophages (PubMed:22174130)

SLC29A3 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

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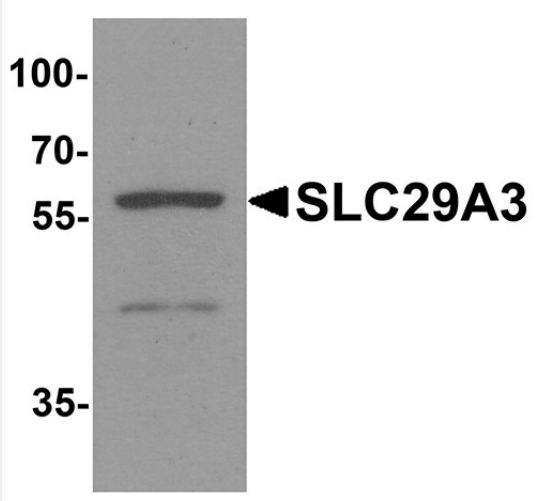
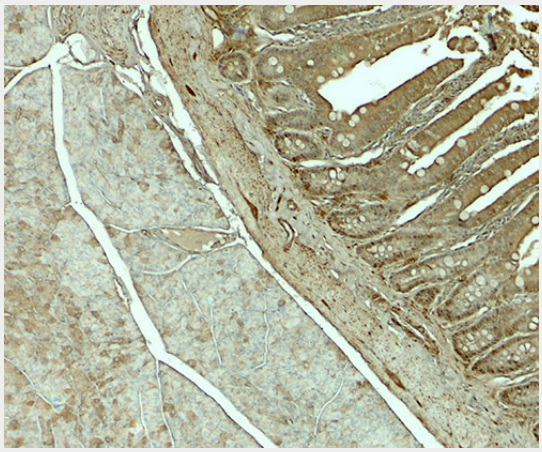
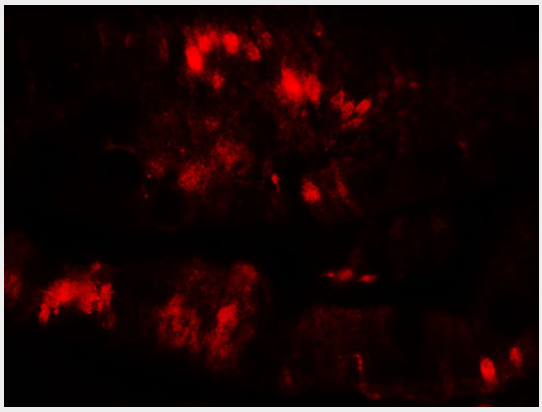
SLC29A3 Antibody - Images



Western blot analysis of SLC29A3 in mouse bladder tissue lysate with SLC29A3 antibody at 1 µg/ml.



Immunohistochemistry of SLC29A3 in rat colon tissue with SLC29A3 antibody at 5 µg/mL.



Immunofluorescence of SLC29A3 in rat colon muscle tissue with SLC29A3 antibody at 20 µg/mL.

SLC29A3 Antibody - Background

SLC29A3 is a member of the equilibrative nucleoside transporter family which plays a key role in

nucleoside and nucleobase uptake for salvage pathways of nucleotide synthesis (1,2). SLC29A3 is a transmembrane glycoprotein that localizes to the lysosomal membrane and is a broad selectivity, low affinity nucleoside transporter (3). Mutations in the SLC29A3 gene have been associated with H syndrome, which is characterized by cutaneous hyperpigmentation and hypertrichosis, hepatosplenomegaly, heart anomalies, and hypogonadism (4). A related disorder, PHID (pigmented hypertrichosis with insulin-dependent diabetes mellitus), has also been associated with mutations at this locus (5).

SLC29A3 Antibody - References

Hyde RJ, Cass CE, Young JD, et al. The ENT family of eukaryotic nucleoside and nucleobase transporters: recent advances in the investigation of structure/function relationships and the identification of novel isoforms. Mol. Membr. Biol. 2001; 18:53-63.
Young JD, Yao SY, Baldwin JM, et al. The human concentrative and equilibrative nucleoside transporter families, SLC28 and SLC29. Mol. Aspects. Med. 34:529-47.
Baldwin SA, Yao SY, Hyde RJ, et al. Functional characterization of novel human and mouse equilibrative nucleoside transporters (hENT3 and mENT3) located in intracellular membranes. J. Biol. Chem. 2005; 280:15880-7.
Priya TP, Philip N, Molho-Pessach V, et al. H syndrome: novel and recurrent mutations in SLC29A3. Br. J. Dermatol. 2010; 162:1132-4.