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SLC29A2 Antibody

Catalog # ASC11904

Product Information

Application	WB, IHC, IF, E
Primary Accession	Q14542
Other Accession	NP_001523, 38708299
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	50113
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	SLC29A2 antibody can be used for detection of SLC29A2 by Western blot at 1 - 2 g/ml. Antibody can also be used for immunohistochemistry starting at 2.5 g/mL. For immunofluorescence start at 20 g/mL.

Additional Information

Gene ID	3177
Other Names	Equilibrative nucleoside transporter 2, 36 kDa nucleolar protein HNP36, Delayed-early response protein 12, Equilibrative nitrobenzylmercaptopurine riboside-insensitive nucleoside transporter, Equilibrative NBMPR-insensitive nucleoside transporter, Hydrophobic nucleolar protein, 36 kDa, Nucleoside transporter, ei-type, Solute carrier family 29 member 2, SLC29A2, DER12, ENT2, HNP36
Target/Specificity	SLC29A2; SLC29A2 antibody is human specific. SLC29A2 antibody is predicted to not cross-react with other SLC29 proteins.
Reconstitution & Storage	SLC29A2 antibody can be stored at 4℃ for three months and -20℃, stable for up to one year.
Precautions	SLC29A2 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	SLC29A2 (HGNC:11004)
Synonyms	DER12, ENT2, HNP36
Function	Bidirectional uniporter involved in the facilitative transport of nucleosides and nucleobases, and contributes to maintaining their cellular homeostasis (PubMed:10722669, PubMed:12527552, PubMed:12590919, PubMed:16214850, PubMed:21795683, PubMed:9396714, PubMed:9478986).

	Functions as a Na(+)-independent, passive transporter (PubMed:9478986). Involved in the transport of nucleosides such as inosine, adenosine, uridine, thymidine, cytidine and guanosine (PubMed:10722669, PubMed:12527552, PubMed:12590919, PubMed:16214850, PubMed:21795683, PubMed:9396714, PubMed:9478986). Also able to transport purine nucleobases (hypoxanthine, adenine, guanine) and pyrimidine nucleobases (thymine, uracil) (PubMed:16214850, PubMed:21795683). Involved in nucleoside transport at basolateral membrane of kidney cells, allowing liver absorption of nucleoside metabolites (PubMed:12527552). Mediates apical nucleoside uptake into Sertoli cells, thereby regulating the transport of nucleosides in testis across the blood-testis-barrier (PubMed:23639800). Mediates both the influx and efflux of hypoxanthine in skeletal muscle microvascular endothelial cells to control the amount of intracellular hypoxanthine available for xanthine oxidase-mediated ROS production (By similarity).
Cellular Location	Apical cell membrane; Multi-pass membrane protein. Basolateral cell membrane; Multi-pass membrane protein. Note=Localized to the apical membrane of Sertoli cells.
Tissue Location	Highly expressed in skeletal muscle (PubMed:9478986). Expressed in liver, lung, placenta, brain, heart, kidney and ovarian tissues (PubMed:9478986). Expressed in testis at the blood-brain-barrier (PubMed:23639800).

Background

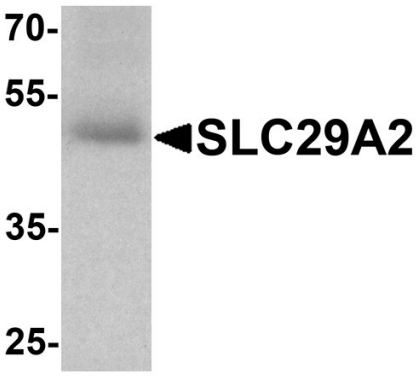
SLC29A2 is a member of the equilibrative nucleoside transporter family which plays a key role in nucleoside and nucleobase uptake for salvage pathways of nucleotide synthesis (1,2). SLC29A2 is a transmembrane glycoprotein that mediates the cellular uptake of nucleosides from the surrounding medium (3). As a nucleoside transporter, SLC29A2 plays an important role in the uptake of nucleoside-based anti-cancer drugs; polymorphisms of point mutations in the gene encoding this protein may affect the efficacy of these drugs (4).

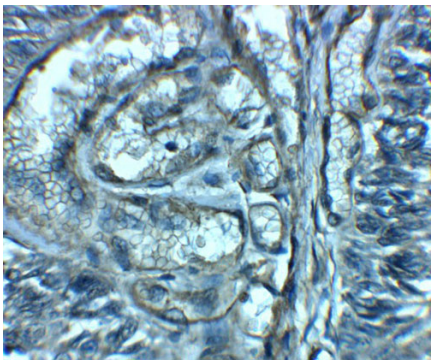
References

Williams JB and Lanahan AA. A mammalian delayed-early response gene encodes HNP36, a novel, conserved nucleolar protein. Biochim. Biophys. Res. Commun. 1995; 213:325-33.
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.
Mangravite LM, Xiao G, and Giacomini KM. Localization of human equilibrative nucleoside transporters, hENT1 and hENT2, in renal epithelial cells. Am. J. Physiol. Renal Physiol. 284:F902-10.
Owen RP, Lagpacan LL, Taylor TR, et al. Functional characterization and haplotype analysis of polymorphisms in the human equilabrative nucleoside transporter, ENT2. Drug Metab. Dispos. 2006; 34:12-5.

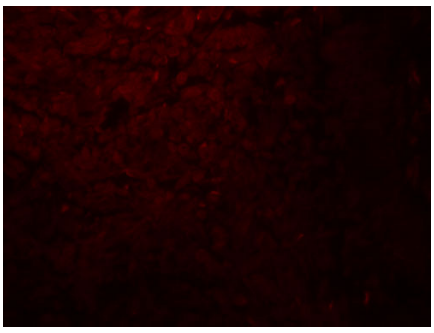
Images

Western blot analysis of SLC29A2 in human bladder tissue lysate with SLC29A2 antibody at 1 µg/ml.





Immunohistochemistry of SLC29A2 in human bladder tissue with SLC29A2 antibody at 2.5 µg/mL.



Immunofluorescence of SLC29A2 in human bladder tissue with SLC29A2 antibody at 20 µg/ml.