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SLC5A8 Antibody (C-Term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP22009b

Product Information

Application	WB, E
Primary Accession	Q8N695
Reactivity	Human
Host	Rabbit
Clonality	polyclonal
Isotype	Rabbit IgG
Clone Names	RB54852
Calculated MW	66578

Additional Information

Gene ID	160728
Other Names	Sodium-coupled monocarboxylate transporter 1, Apical iodide transporter, Electrogenic sodium monocarboxylate cotransporter, Sodium iodide-related cotransporter, Solute carrier family 5 member 8, SLC5A8 {ECO:0000312|EMBL:AAP46193.1}
Target/Specificity	This SLC5A8 antibody is generated from a rabbit immunized with a KLH conjugated synthetic peptide between 579-609 amino acids from the human SLC5A8.
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	SLC5A8 Antibody (C-Term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	SLC5A8 {ECO:0000312|EMBL:AAP46193.1}
Function	Acts as an electrogenic sodium (Na(+)) and chloride (Cl-)- dependent sodium-coupled solute transporter, including transport of monocarboxylates (short-chain fatty acids including L-lactate, D- lactate, pyruvate, acetate,

	propionate, valerate and butyrate), mocarboxylate drugs (nicotinate, benzoate, salicylate and 5- aminosalicylate) and ketone bodies (beta-D-hydroxybutyrate, acetoacetate and alpha-ketoisocaproate), with a Na(+):substrate stoichiometry of between 4:1 and 2:1 (PubMed:14966140, PubMed:15090606, PubMed:16729224, PubMed:16805814, PubMed:17178845, PubMed:17245649, PubMed:17526579, PubMed:20211600, PubMed:30604288). Catalyzes passive carrier mediated diffusion of iodide (PubMed:12107270). Mediates iodide transport from the thyrocyte into the colloid lumen through the apical membrane (PubMed:12107270). May be responsible for the absorption of D- lactate and monocarboxylate drugs from the intestinal tract (PubMed:17245649). Acts as a tumor suppressor, suppressing colony formation in colon cancer, prostate cancer and glioma cell lines (PubMed:12829793, PubMed:15867356, PubMed:18037591). May play a critical role in the entry of L-lactate and ketone bodies into neurons by a process driven by an electrochemical Na(+) gradient and hence contribute to the maintenance of the energy status and function of neurons (PubMed:16805814). Mediates sodium-coupled electrogenic transport of pyroglutamate (5-oxo-L-proline) (PubMed:20211600). Can mediate the transport of chloride, bromide, iodide and nitrate ions when the external concentration of sodium ions is reduced (PubMed:19864324). Part of D-serine transport systems. May contribute to D-serine reabsorption at the brush border of renal proximal tubules thus modulating the dynamics of urinary versus blood D-serine levels.
Cellular Location	Apical cell membrane; Multi-pass membrane protein. Note=Expressed at the apical membrane of tall thyrocytes, colonic epithelial cells and proximal tubule epithelial cells.
Tissue Location	Expressed in normal thyroid, localized at the apical pole of thyroid cells facing the colloid lumen, but expression profoundly decreased in thyroid carcinomas. Expressed in normal colon but absent in colon aberrant crypt foci and colon cancers. Present in normal kidney cortex, brain, prostate, gastric mucosa and breast tissue but was significantly down-regulated in primary gliomas, gastric cancer, prostate tumors and breast tumors

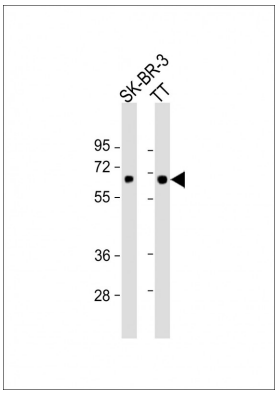
Background

Acts as an electrogenic sodium (Na(+)) and chloride (Cl-)-dependent sodium-coupled solute transporter, including transport of monocarboxylates (short-chain fatty acids including L-lactate, D-lactate, pyruvate, acetate, propionate, valerate and butyrate), lactate, mocarboxylate drugs (nicotinate, benzoate, salicylate and 5-aminosalicylate) and ketone bodies (beta-D- hydroxybutyrate, acetoacetate and alpha-ketoisocaproate), with a Na(+):substrate stoichiometry of between 4:1 and 2:1. Catalyzes passive carrier mediated diffusion of iodide. Mediates iodide transport from the thyrocyte into the colloid lumen through the apical membrane. May be responsible for the absorption of D- lactate and monocarboxylate drugs from the intestinal tract. Acts as a tumor suppressor, suppressing colony formation in colon cancer, prostate cancer and glioma cell lines. May play a critical role in the entry of L-lactate and ketone bodies into neurons by a process driven by an electrochemical Na(+) gradient and hence contribute to the maintenance of the energy status and function of neurons.

References

Rodriguez A.-M.,et al.J. Clin. Endocrinol. Metab. 87:3500-3503(2002).
Li H.,et al.Proc. Natl. Acad. Sci. U.S.A. 100:8412-8417(2003).
Miyauchi S.,et al.J. Biol. Chem. 279:13293-13296(2004).
Coady M.J.,et al.J. Physiol. (Lond.) 557:719-731(2004).
Scherer S.E.,et al.Nature 440:346-351(2006).

Images



All lanes : Anti-SLC5A8 Antibody (C-Term) at 1:1000 dilution Lane 1: SK-BR-3 whole cell lysate Lane 2: TT 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 : 67 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

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