



## Rabbit Anti-SLC4A4 variant A antibody

SL10416R

<b>Product Name:</b>	SLC4A4 variant A
<b>Chinese Name:</b>	碳酸氢钠协同Transporter4-A4突变型抗体
<b>Alias:</b>	sodium bicarbonate cotransporter NBCe1 variant A; electrogenic sodium bicarbonate cotransporter 1 isoform 2; hhNMC; HNBC1; KNBC; NBC1; NBC2; NBCe1-A; pNBC; SLC4A5; NBCe1-A; Slc4a4; SLC4A4 protein.
<b>Organism Species:</b>	Rabbit
<b>Clonality:</b>	Polyclonal
<b>React Species:</b>	Human,Mouse,Rat,
<b>Applications:</b>	WB=1:500-2000ELISA=1:500-1000IHC-P=1:400-800IHC-F=1:400-800ICC=1:100-500IF=1:100-500 (Paraffin sections need antigen repair) not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
<b>Molecular weight:</b>	114kDa
<b>Cellular localization:</b>	The cell membrane
<b>Form:</b>	Lyophilized or Liquid
<b>Concentration:</b>	1mg/ml
<b>immunogen:</b>	KLH conjugated synthetic peptide derived from mouse SLC4A4 variant A:1-23/1035<Cytoplasmic>
<b>Lsotype:</b>	IgG
<b>Purification:</b>	affinity purified by Protein A
<b>Storage Buffer:</b>	0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.
<b>Storage:</b>	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.
<b>PubMed:</b>	<a href="#">PubMed</a>
<b>Product Detail:</b>	SLC4A4 (Electrogenic sodium bicarbonate cotransporter 1) is an electrogenic sodium/bicarbonate cotransporter with a Na(+):HCO3(-) stoichiometry varying from 1:2 to 1:3. It may regulate bicarbonate influx/efflux at the basolateral membrane of cells and regulate intracellular pH. SLC4A4 interacts with carbonic anhydrase 2 and

carbonic anhydrase 4 which may regulate transporter activity. There are four named isoforms produced by alternative splicing.

This gene encodes a sodium bicarbonate cotransporter (NBC) involved in the regulation of bicarbonate secretion and absorption and intracellular pH. Mutations in this gene are associated with proximal renal tubular acidosis. Multiple transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Oct 2008].

**Function:**

Electrogenic sodium/bicarbonate cotransporter with a Na(+):HCO<sub>3</sub>(-) stoichiometry varying from 1:2 to 1:3. May regulate bicarbonate influx/efflux at the basolateral membrane of cells and regulate intracellular pH.

**Subunit:**

Interacts with CA2/carbonic anhydrase 2 and CA4/carbonic anhydrase 4 which may regulate transporter activity.

**Subcellular Location:**

Basolateral cell membrane; Multi-pass membrane protein.

**Tissue Specificity:**

Isoform 1 is expressed in pancreas and to a lower extent in heart, skeletal muscle, liver, parotid salivary glands, prostate, colon, stomach, thyroid, brain and spinal chord. Corneal endothelium cells express only isoform 1 (at protein level). Isoform 2 is specifically expressed in kidney at the level of proximal tubules.

**Post-translational modifications:**

Phosphorylation of Ser-1026 by PKA increases the binding of CA2 and changes the Na(+):HCO<sub>3</sub>(-) stoichiometry of the transporter from 3:1 to 2:1. Phosphorylation of Thr-49 regulates isoform 1 conductance.

N-glycosylation is not necessary for the transporter basic functions.

**DISEASE:**

Defects in SLC4A4 are the cause of proximal renal tubular acidosis with ocular abnormalities (pRTA-OA) [MIM:604278]; also known as renal tubular acidosis II. Caused by an impairment of bicarbonate absorption in the proximal tubule, proximal renal tubular acidosis (pRTA) is characterized by a decreased renal HCO<sub>3</sub>(-) threshold. pRTA-OA is an extremely rare autosomal recessive syndrome characterized by short stature, profound pRTA, mental retardation, bilateral glaucoma, cataracts and bandkeratopathy.

Note=Loss of interaction with and stimulation by CA4 is the cause of retinitis pigmentosa type 17 (RP17).

**Similarity:**

Belongs to the anion exchanger (TC 2.A.31) family.

**SWISS:**  
Q9Y6R1

**Gene ID:**  
8671

**Database links:**

[Entrez Gene: 8671](#)Human

[Entrez Gene: 84484](#)Rat

[Omid: 603345](#)Human

[SwissProt: Q9Y6R1](#)Human

[SwissProt: Q9XSZ4](#)Rabbit

[SwissProt: Q9JI66](#)Rat

[Unigene: 5462](#)Human

[Unigene: 11114](#)Rat

**Important Note:**

This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

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