

Product datasheet for **TA328912**

Slc4a4 Rabbit Polyclonal Antibody

Product data:

Product Type:	Primary Antibodies
Applications:	IF, IHC, WB
Recommended Dilution:	WB: 1:200-1:2000; IHC: 1:100-1:3000
Reactivity:	Mouse, Rat
Host:	Rabbit
Clonality:	Polyclonal
Immunogen:	Peptide (C)ENMGAEFLESMEEGR, corresponding to amino acid residues 22-36 of rat Concentrative Nucleoside Transporter 1 . Intracellular, N-terminus.
Formulation:	Lyophilized. Concentration before lyophilization ~0.8mg/ml (lot dependent, please refer to CoA along with shipment for actual concentration). Buffer before lyophilization: phosphate buffered saline (PBS), pH 7.4, 1% BSA, 0.05% NaN ₃ .
Reconstitution Method:	Add 50 ul double distilled water (DDW) to the lyophilized powder.
Purification:	Affinity purified on immobilized antigen.
Conjugation:	Unconjugated
Storage:	Store at -20°C as received.
Stability:	Stable for 12 months from date of receipt.
Gene Name:	solute carrier family 4 member 4
Database Link:	NP_445876 Entrez Gene 54403 Mouse Entrez Gene 84484 Rat Q9J166



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Background:

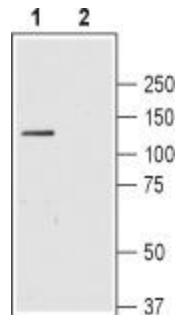
SLC4 membrane transporter proteins play important roles in kidney acid-base regulation through their transport of bicarbonate (or carbonate), Na⁺, Cl⁻, and (possibly NH₄⁺)¹. These transporters differ in their substrate (Na⁺, Cl⁻) dependence, charge transport stoichiometry, cell-type and developmental expression, functional regulation, and protein-protein interactions. In mammals, SLC4 proteins are encoded by 10 different genes that share protein sequence homology and are grouped according to their functional properties. In humans, the electrogenic sodium bicarbonate cotransporter NBCe-1 is encoded by the SLC4A4 gene. NBCe1-A has a large N-terminal cytoplasmic region, a lipid embedded transmembrane region, and a C-terminal cytoplasmic tail. The N-terminal cytoplasmic region is tightly folded and is predicted to form a domain structure, unlike the freely aqueous accessible C-terminal cytoplasmic tail. NBCe1-A is composed of either 10 or 14 transmembrane domains. Based on the 10 transmembrane topology, a large extracellular loop (EL) is present between TM3 and TM4 and contains two glycosylated sites. The oligomeric state of the cotransporter is dimeric and each monomeric subunit has independent transport activity. Mutations in NBCe1 cause autosomal recessive proximal renal tubular acidosis (pRTA). Patients with NBCe1 mutations have severe pRTA, growth and mental retardation, basal ganglia calcification, cataracts, corneal opacities (band keratopathy), glaucoma, elevated serum amylase and lipase, and defects in the enamel consistent with amelogenesis imperfect. Mice with loss of NBCe1 have a more severe phenotype with marked volume deletion and decreased survival.

Synonyms:

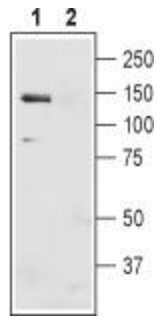
DKFZp781H1314; hhNMC; HNBC1; KNBC; kNBC1; NBC; NBC1; NBC2; NBCE1; pNBC; SLC4A5

Note:

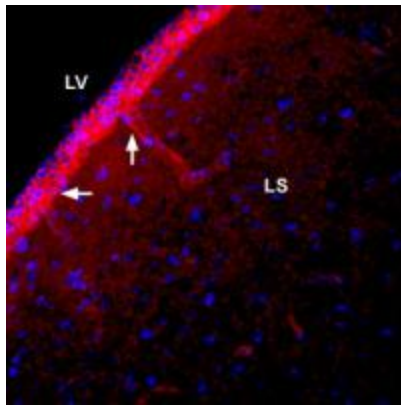
This antibody was tested in live cell imaging. Please see IF/ICC data for detail.

Product images:

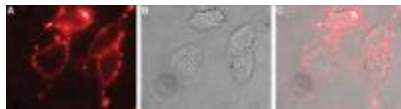
Western blot analysis of rat brain lysate: 1. Anti-NBCe1 (extracellular) antibody, (1:200). 2. Anti-NBCe1 (extracellular) antibody, preincubated with the control peptide antigen.



Western blot analysis of mouse liver membranes:
 1. Anti-NBCE1 (extracellular) antibody, (1:400). 2. Anti-NBCE1 (extracellular) antibody, preincubated with the control peptide antigen.



Expression of NBCE1 in rat lateral septum.
 Immunohistochemical staining of immersion-fixed, free floating rat brain frozen sections using Anti-NBCE1 (extracellular) antibody, (1:400). NBCE1 staining (red) is detected in blood vessel outlines (vertical arrow) in the lateral septum (LS) and along the wall of the lateral ventricle (LV) (horizontal arrow). DAPI is used as the counterstain (blue).



Expression of NBCE1 in rat PC12 cells.
 Immunocytochemical staining of live intact rat PC12 pheochromocytoma cells. A. Extracellular staining of cells with Anti-NBCE1 (extracellular) antibody, (1:100), followed by goat anti-rabbit-AlexaFluor-594 secondary antibody (red). B. Live image of the cells. C. Merge of the two images.