

CLCN2 Antibody (internal region)
Peptide-affinity purified goat antibody
Catalog # AF3183a

Specification

CLCN2 Antibody (internal region) - Product Information

Application	WB, E
Primary Accession	P51788
Other Accession	NP_004357.3 , 1181 , 12724 (mouse) , 29232 (rat)
Reactivity	Human
Predicted	Mouse, Rat, Rabbit, Dog
Host	Goat
Clonality	Polyclonal
Concentration	0.5 mg/ml
Isotype	IgG
Calculated MW	98535

CLCN2 Antibody (internal region) - Additional Information

Gene ID 1181

Other Names

Chloride channel protein 2, CIC-2, CLCN2

Dilution

WB~~1:1000

E~~N/A

Format

0.5 mg/ml in Tris saline, 0.02% sodium azide, pH7.3 with 0.5% bovine serum albumin

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

CLCN2 Antibody (internal region) is for research use only and not for use in diagnostic or therapeutic procedures.

CLCN2 Antibody (internal region) - Protein Information

Name CLCN2 {ECO:0000303|PubMed:29403011, ECO:0000312|HGNC:HGNC:2020}

Function

Voltage-gated and osmosensitive chloride channel. Forms a homodimeric channel where each subunit has its own ion conduction pathway. Conducts double-barreled currents controlled by two

types of gates, two fast glutamate gates that control each subunit independently and a slow common gate that opens and shuts off both subunits simultaneously. Displays inward rectification currents activated upon membrane hyperpolarization and extracellular hypotonicity (PubMed:16155254, PubMed:17567819, PubMed:19191339, PubMed:23632988, PubMed:29403011, PubMed:29403012, PubMed:36964785, PubMed:38345841). Contributes to chloride conductance involved in neuron excitability. In hippocampal neurons, generates a significant part of resting membrane conductance and provides an additional chloride efflux pathway to prevent chloride accumulation in dendrites upon GABA receptor activation. In glia, associates with the auxiliary subunit HEPACAM/GliaCAM at astrocytic processes and myelinated fiber tracts where it may regulate transcellular chloride flux buffering extracellular chloride and potassium concentrations (PubMed:19191339, PubMed:22405205, PubMed:23707145). Regulates aldosterone production in adrenal glands. The opening of CLCN2 channels at hyperpolarized membrane potentials in the glomerulosa causes cell membrane depolarization, activation of voltage-gated calcium channels and increased expression of aldosterone synthase, the rate-limiting enzyme for aldosterone biosynthesis (PubMed:29403011, PubMed:29403012). Contributes to chloride conductance in retinal pigment epithelium involved in phagocytosis of shed photoreceptor outer segments and photoreceptor renewal (PubMed:36964785). Conducts chloride currents at the basolateral membrane of epithelial cells with a role in chloride reabsorption rather than secretion (By similarity) (PubMed:16155254). Permeable to small monovalent anions with chloride > thiocyanate > bromide > nitrate > iodide ion selectivity (By similarity) (PubMed:29403012).

Cellular Location

Cell membrane; Multi-pass membrane protein. Basolateral cell membrane; Multi-pass membrane protein. Cell projection, dendritic spine membrane {ECO:0000250|UniProtKB:P35525}; Multi-pass membrane protein. Cell projection, axon {ECO:0000250|UniProtKB:P35525} Note=Sorting to the basolateral membrane is mediated by AP-1 clathrin adapter (PubMed:16155254). Localizes at axon initial segments and dendritic shaft and spikes. Colocalizes with HEPACAM and GFAP at astrocyte end-foot in contact with brain capillaries and other glial cells (By similarity) (PubMed:22405205, PubMed:23707145) {ECO:0000250|UniProtKB:P35525, ECO:0000250|UniProtKB:Q9R0A1, ECO:0000269|PubMed:16155254, ECO:0000269|PubMed:22405205, ECO:0000269|PubMed:23707145}

Tissue Location

Ubiquitously expressed. Moderately expressed in aortic and coronary vascular smooth muscle cells and expressed at a low level in aortic endothelial cells. Expressed in the adrenal gland, predominantly in the zona glomerulosa (PubMed:29403011). Expressed in white matter perivascular astrocytes and ependymal cells (at protein level).

CLCN2 Antibody (internal region) - Protocols

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

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

CLCN2 Antibody (internal region) - Images



AF3183a (0.3 µg/ml) staining of HeLa lysate (35 µg protein in RIPA buffer). Primary incubation was 1 hour. Detected by chemiluminescence.

CLCN2 Antibody (internal region) - Background

This antibody is expected to recognize all reported isoforms (NP_004357.3; NP_001164558.1; NP_001164559.1; NP_001164560.1).

CLCN2 Antibody (internal region) - References

Rapid recycling of ClC-2 chloride channels between plasma membrane and endosomes: role of a tyrosine endocytosis motif in surface retrieval. Cornejo I, Niemeyer MI, Zúñiga L, Yusef YR, Sepúlveda FV, Cid LP. J Cell Physiol. 2009 Dec;221(3):650-7. PMID: 19711355