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CLCNKA Antibody

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP51747

Product Information

Application	WB
Primary Accession	P51800
Reactivity	Human, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	75285

Additional Information

Gene ID	1187
Other Names	Chloride channel protein ClC-Ka, Chloride channel Ka, ClC-K1, CLCNKA
Dilution	WB~~1:1000
Format	0.01M PBS, pH 7.2, 0.09% (W/V) Sodium azide, Glycerol 50%
Storage	Store at -20 °C.Stable for 12 months from date of receipt

Protein Information

Name	CLCNKA {ECO:0000303|PubMed:18310267, ECO:0000312|HGNC:HGNC:2026}
Function	Anion-selective channel permeable to small monovalent anions with ion selectivity for chloride > bromide > nitrate > iodide (PubMed:11734858, PubMed:12111250). Forms a homodimeric channel where each subunit has its own ion conduction pathway. May conduct double- barreled currents controlled by two types of gates, two fast gates that control each subunit independently and a slow common gate that opens and shuts off both subunits simultaneously (PubMed:11734858, PubMed:12111250, PubMed:18310267, PubMed:18776122, PubMed:19646679, PubMed:20538786). Assembles with the regulatory subunit BSND/Barttin for sorting at the basolateral plasma membrane domain and functional switch to the ion conducting state. CLCNKA:BSND channels display mostly a linear current-voltage relationship with fast gating at negative potentials (PubMed:11734858, PubMed:12111250, PubMed:18310267, PubMed:18776122, PubMed:20538786). Mediates transepithelial chloride transport from the lumen to interstitial compartment along the thin ascending limb of Henle's loop, contributing to generation of hypertonic medullary interstitium as a countercurrent system to achieve urine concentration (By similarity) (PubMed:15044642). Conducts chloride currents

	in the stria vascularis of the inner ear to establish the endocochlear potential necessary for normal hearing (PubMed:15044642, PubMed:18310267, PubMed:19646679).
Cellular Location	Basolateral cell membrane {ECO:0000250|UniProtKB:Q9WUB7}; Multi-pass membrane protein

Background

Voltage-gated chloride channel. Chloride channels have several functions including the regulation of cell volume; membrane potential stabilization, signal transduction and transepithelial transport. May be important in urinary concentrating mechanisms.

References

Kieferle S.,et al.Proc. Natl. Acad. Sci. U.S.A. 91:6943-6947(1994).
Ota T.,et al.Nat. Genet. 36:40-45(2004).
Suzuki Y.,et al.Submitted (JUL-2006) to the EMBL/GenBank/DDBJ databases.
Gregory S.G.,et al.Nature 441:315-321(2006).
Schutte B.C.,et al.Submitted (MAR-1997) to the EMBL/GenBank/DDBJ databases.

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