10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

NHEDC2 Antibody (C-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP17738b

Product Information

Application	WB, E
Primary Accession	Q86UD5
Other Accession	Q5BKR2, NP_849155.2
Reactivity	Human
Predicted	Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB37944
Calculated MW	57564
Antigen Region	458-486

Additional Information

Gene ID	133308
Other Names	Mitochondrial sodium/hydrogen exchanger 9B2, Mitochondrial Na(+)/H(+) exchanger NHA2, Na(+)/H(+) exchanger-like domain-containing protein 2, NHE domain-containing protein 2, Sodium/hydrogen exchanger-like domain-containing protein 2, Solute carrier family 9 subfamily B member 2, SLC9B2, NHA2, NHEDC2
Target/Specificity	This NHEDC2 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 458-486 amino acids from the C-terminal region of human NHEDC2.
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	NHEDC2 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	SLC9B2 (HGNC:25143)

Synonyms	NHA2, NHEDC2
Function	Electroneutral Na(+) Li(+)/H(+) antiporter that extrudes Na(+) or Li(+) in exchange for external protons across the membrane (PubMed:18000046, PubMed:18508966, PubMed:22948142, PubMed:28154142, PubMed:36177733). Uses the proton gradient/membrane potential to extrude sodium (PubMed:22948142). Contributes to the regulation of intracellular pH and sodium homeostasis (By similarity). Also able to mediate Na(+)/Li(+) antiporter activity in kidney (PubMed:22948142). May play a physiological role in renal tubular function and blood pressure homeostasis (By similarity). Plays an important role for insulin secretion and clathrin-mediated endocytosis in beta-cells (By similarity). Involved in sperm motility and fertility (By similarity). It is controversial whether SLC9B2 plays a role in osteoclast differentiation or not (By similarity).
Cellular Location	Cell membrane; Multi-pass membrane protein {ECO:0000250|UniProtKB:A0A6P3HVI0}. Mitochondrion membrane {ECO:0000250|UniProtKB:Q5BKR2}; Multi-pass membrane protein {ECO:0000250|UniProtKB:A0A6P3HVI0}. Endosome membrane {ECO:0000250|UniProtKB:Q5BKR2}; Multi-pass membrane protein {ECO:0000250|UniProtKB:A0A6P3HVI0}. Recycling endosome membrane {ECO:0000250|UniProtKB:Q5BKR2}; Multi-pass membrane protein {ECO:0000250|UniProtKB:A0A6P3HVI0}. Cytoplasmic vesicle, secretory vesicle, synaptic vesicle membrane {ECO:0000250|UniProtKB:Q5BKR2}; Multi-pass membrane protein {ECO:0000250|UniProtKB:A0A6P3HVI0}. Cell projection, cilium, flagellum membrane {ECO:0000250|UniProtKB:Q5BKR2}; Multi-pass membrane protein {ECO:0000250|UniProtKB:A0A6P3HVI0} Basolateral cell membrane {ECO:0000250|UniProtKB:Q5BKR2}; Multi-pass membrane protein {ECO:0000250|UniProtKB:A0A6P3HVI0}. Apical cell membrane {ECO:0000250|UniProtKB:Q5BKR2}; Multi-pass membrane protein {ECO:0000250|UniProtKB:A0A6P3HVI0}. Note=Strong colocalization with LAMP1 and TCIRG1 in osteoclasts. In beta-cells colocalizes with RAB4A and SYP. Localizes to the basolateral membrane of polarized osteoclasts. {ECO:0000250|UniProtKB:Q5BKR2}
Tissue Location	Widely expressed (PubMed:18508966). High levels detected in the distal tubules of the kidney nephron (PubMed:18508966) Detected in red blood cells (at protein level) (PubMed:18000046, PubMed:18508966).

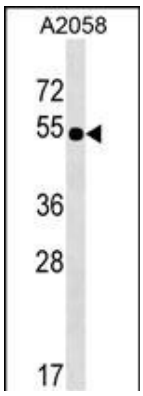
Background

Sodium hydrogen antiporters, such as NHEDC2, convert the proton motive force established by the respiratory chain or the F1F0 mitochondrial ATPase into sodium gradients that drive other energy-requiring processes, transduce environmental signals into cell responses, or function in drug efflux (Xiang et al., 2007 [PubMed 18000046]).

References

Kalsi, G., et al. Hum. Mol. Genet. 19(12):2497-2506(2010)
Schushan, M., et al. J. Mol. Biol. 396(5):1181-1196(2010)
Fuster, D.G., et al. J. Am. Soc. Nephrol. 19(8):1547-1556(2008)
Battaglino, R.A., et al. Bone 42(1):180-192(2008)
Xiang, M., et al. Proc. Natl. Acad. Sci. U.S.A. 104(47):18677-18681(2007)

Images



NHEDC2 Antibody (C-term) (Cat. #AP17738b) western blot analysis in A2058 cell line lysates (35ug/lane).This demonstrates the NHEDC2 antibody detected the NHEDC2 protein (arrow).