Datasheet for ABIN863199

anti-SLC9A3 antibody

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Overview

Quantity:	100 µg
Target:	SLC9A3
Reactivity:	Rat
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This SLC9A3 antibody is un-conjugated
Application:	Western Blotting (WB), Immunohistochemistry (IHC), Immunocytochemistry (ICC), Immunofluorescence (IF)

Product Details

Immunogen:	Synthetic peptide mapping to AA 809 to 831 of rat sequence
Specificity:	Most abundant in colon and small intestine, followed by kidney and stomach. In kidney, expressed in proximal tubules and outer medulla (at protein level),Detects ~84 kDa.
Cross-Reactivity:	Mouse, Rat
Purification:	Protein A Purified

Target Details

Target:	SLC9A3
Alternative Name:	NHE3 (SLC9A3 Products)
Background:	Sodium-hydrogen exchanger 3 (NHE3, Slc9a3) is an epithelial transport protein that carries out 1:1 exchange of Na+ and H+ across the plasma membrane. It is apically located in the proximal

Target Details

	tubule of the kidney, the thick ascending limb of the kidney, and in small intestine (1). NHE3 is phosphorylated and regulated by multiple kinases including PKA, SGK1 and CK2. It can be phosphorylated by calyculin A, and dephosphorylated by PP1 catalytic subunit in vitro (2).
Gene ID:	24784
NCBI Accession:	NP_036786
UniProt:	P26433
Pathways:	Proton Transport

Application Details

Application Notes:	• WB (1:1000) • IHC (1:25) • optimal dilutions for assays should be determined by the user.
Comment:	1 µg/ml of ABIN863199 was sufficient for detection of HNE3 in 10 µg of rat kidney tissue lysate by colorimetric immunoblot analysis using Goat anti-rabbit IgG:HRP as the secondary antibody.
Restrictions:	For Research Use only

Handling

Format:	Liquid
Concentration:	1 mg/mL
Buffer:	PBS, 50 % glycerol, 0.09 % sodium azide, Storage buffer may change when conjugated
Preservative:	Sodium azide
Precaution of Use:	This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Storage:	-20 °C
Storage Comment:	-20°C

Publications

Product cited in:	Jones, Bailey, Murray, Lu, McNeilly, Schlötzer-Schrehardt, Lennon, Sado, Brownstein, Mullins, Kadler, Van Agtmael: "ER stress and basement membrane defects combine to cause glomerular and tubular renal disease resulting from Col4a1 mutations in mice." in: **Disease**

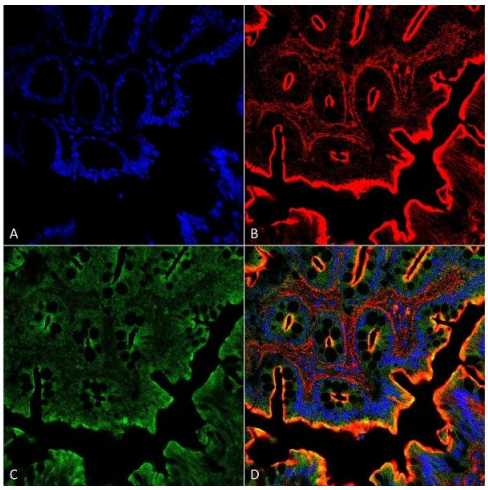
Publications

models & mechanisms, Vol. 9, Issue 2, pp. 165-76, (2016) (PubMed).

Lee, Osis, Handlogten, Guo, Verlander, Weiner: "Effect of dietary protein restriction on renal ammonia metabolism." in: **American journal of physiology. Renal physiology**, Vol. 308, Issue 12, pp. F1463-73, (2015) (PubMed).

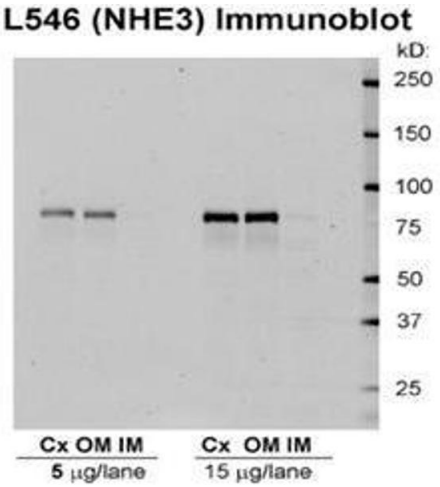
Bourgeois, Bounoure, Christensen, Ramakrishnan, Houillier, Devuyst, Wagner: " Haploinsufficiency of the ammonia transporter Rhcg predisposes to chronic acidosis: Rhcg is critical for apical and basolateral ammonia transport in the mouse collecting duct." in: **The Journal of biological chemistry**, Vol. 288, Issue 8, pp. 5518-29, (2013) (PubMed).

Images



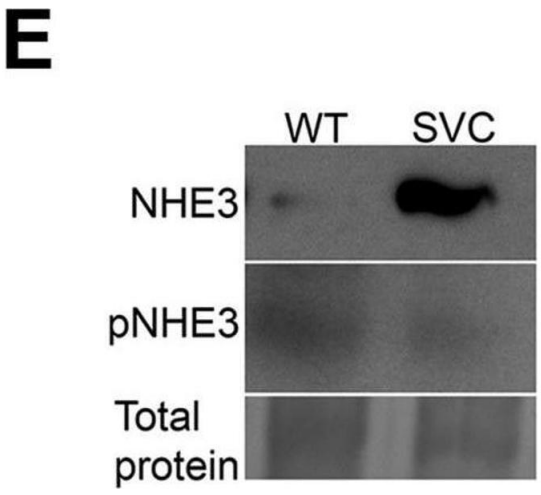
Immunohistochemistry

Image 1. Immunohistochemistry analysis using Rabbit Anti-NHE3 Polyclonal Antibody (ABIN863199). Tissue: Colon. Species: Rat. Fixation: Formalin Fixed Paraffin-Embedded. Primary Antibody: Rabbit Anti-NHE3 Polyclonal Antibody (ABIN863199) at 1:25 for 1 hour at RT. Secondary Antibody: Goat Anti-Rabbit IgG:Alexa Fluor 488. Counterstain: Actin-binding Phalloidin-Alexa Fluor 633, DAPI (blue) nuclear stain. Magnification: 63X. (A) DAPI (blue) nuclear stain. (B) Phalloidin Alex Fluor 633 F-Actin stain. (C) NHE3 Antibody (D) Composite



Western Blotting

Image 2. NHE3 Western Blotting, rat kidney tissue.



Western Blotting

Image 3. Analysis of renal function. (A-D) In vivo renal function analysis of 1-, 3- to 4- and 6- to 8-month-old Col4a1+/Raw (black bars) and WT (white bars) mice. (A) Reduced mean arterial blood pressure in Col4a1+/Raw animals at all ages. (B) Reduced sodium excretion in Col4a1+/Raw animals at all ages. (C) Inulin clearance assays uncovered reduced glomerular filtration rate per gram body weight at 3months (~40 % reduction), but no further decline with age. (D) Measurement of sodium excretion in the presence of the diuretics furosemide and thiazide remains reduced in mutant animals. Blockade of ENaC by amiloride abolished the difference between WT and mutant mice. (E) Western blotting showed ~16-fold increased levels of total NHE3 (NHE3) in Col4a1+/Svc (SVC) mice but unaltered phosphorylated NHE3 (p-NHE3). Representative band of total protein stain is given as loading control (entire gel is provided in Fig. S6). (F) ImageJ densitometry analysis of total and p-NHE3. *P<0.05, **P<0.01, ***P<0.001. n=5-7 in A-E, n=3-5 in F. - figure provided by CiteAb. Source: PMID26839400

