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Zuschläge

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- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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Anti-NCC Antibody

Rabbit Anti-Rat NCC Polyclonal
Catalog No. SPC-402



Discovery through partnership | Excellence through quality

Overview

Product Name

NCC Antibody

Description

Rabbit Anti-Rat NCC Polyclonal

Species Reactivity

Dog, Human, Mouse, Rat

Applications

WB, IHC, ICC/IF, IEM

Antibody Dilution

WB (1:1000), IHC (1:200); optimal dilutions for assays should be determined by the user.

Host Species

Rabbit

Immunogen Species

Rat

Immunogen

Produced against a synthetic peptide mapping to a segment of rat NCC (amino acids 74-95), N-terminal

Concentration

1 mg/ml

Conjugates

Alkaline Phosphatase, APC, ATTO 390, ATTO 488, ATTO 565, ATTO 594, ATTO 633, ATTO 655, ATTO 680, ATTO 700, Biotin, FITC, HRP, PE/ATTO 594, PerCP, RPE, Streptavidin, Unconjugated

Properties

Storage Buffer

PBS, 50% glycerol, 0.09% sodium azide

Storage Temperature

-20°C

Shipping Temperature

Blue Ice or 4°C

Purification

Protein A purified

Clonality

Polyclonal

Specificity

Detects ~160kDa.

Cite This Product

Rabbit Anti-Rat NCC Polyclonal (StressMarq Biosciences Inc., Victoria BC CANADA, Catalog # SPC-402)

Certificate Of Analysis

1 µg/ml of SPC-402 was sufficient for detection of NCC3 in 10 µg of rat kidney tissue lysate by colorimetric immunoblot analysis using Goat anti-rabbit IgG:HRP as the secondary antibody.

Biological Description

Alternative Names

SLC12A3 Antibody, SCYL1 Antibody,CKb10 Antibody, MCP-4 Antibody, MGC17134 Antibody, NCC-1 Antibody, NCC1 Antibody, SCYA13 Antibody, CK-beta-10 Antibody, monocyte chemoattractant protein 4 Antibody, monocyte chemotactic protein 4 Antibody, new CC chemokine 1 Antibody, small inducible cytokine A13 Antibody, small inducible cytokine subfamily A (Cys-Cys) member 13 Antibody, chemokine (C-C) Antibody

Research Areas

Cancer, Ion Pumps/Transporters, Neuroscience, Pumps/Transporters

Cellular Localization

Membrane

Accession Number

NP_062218, NP_000330

Gene ID

54300, 6559

Swiss Prot

P55018, P55017

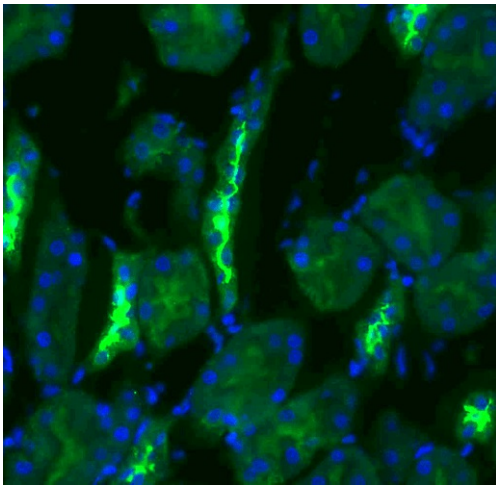
Scientific Background

NCC, a thiazide-sensitive NaCl co-transporter, is found on the apical membrane of the distal convoluted tubule, where it is the principal mediator of Na⁺ and Cl⁻ reabsorption in this segment of the nephron. It is activated by phosphorylation, and has been implicated in renal NaCl and K⁺ homeostasis (1). Regulation of NCC expression and phosphorylation by dietary NaCl restriction appears to involve SGK1(1). In experiments with angiotensin II-infused mice, increased sensitivity to Ang II may involved over-activity of NCC (2). Therefore, NCC is the target of thiazide diuretics used in the treatment of hypertension (1). Molecular experiments have also shown that NCC has been detected in the lens cortex, core and fiber cells of a rat (3).

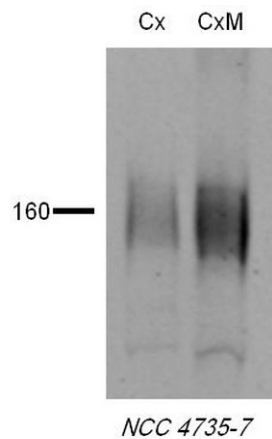
References

1. Vallon V., Schroth J, Lang F, Kuhl D and Uchida S. (2009) Am J Physiol Renal Physiol. 297(3): F704-712.
 2. Tiwari S., et al. (2009) Am J Nephrol. 30(6): 554-562.
 3. Chee K.N., Vorontsova I., Lim J.C., Kistler J. and Donaldson P.J. (2010) Mol Vis. 16:800-812.
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Product Images



Immunohistochemistry analysis using Rabbit Anti-NCC Polyclonal Antibody (SPC-402). Tissue: kidney tissue. Species: Rat. Primary Antibody: Rabbit Anti-NCC Polyclonal Antibody (SPC-402) at 1:200. Secondary Antibody: FITC Goat Anti-Rabbit (green).



Western blot analysis of Rat tissue lysates showing detection of NCC protein using Rabbit Anti-NCC Polyclonal Antibody (SPC-402). Primary Antibody: Rabbit Anti-NCC Polyclonal Antibody (SPC-402) at 1:1000.

Product Citations (12)

Western Blot

(Pro)Renin Receptor Regulates Potassium Homeostasis through a Local Mechanism.

Xu, C. et al. (2016) Am J Physiol Renal Physiol. [Epub ahead of print]

PubMed ID: 27440776 **Reactivity:** Rat **Applications:** Western Blot

A Systems Level Analysis of Vasopressin-mediated Signaling Networks in Kidney Distal Convoluted Tubule Cells.

Cheng, L., Wu, Q., Kortenoeven, M.L.A., Pisitkun, T., and Fenton, R.A. (2015) Sci Rep. 5:12829.

PubMed ID: 26239621 **Reactivity:** Mouse **Applications:** Western Blot

Increased Epithelial Sodium Channel Activity Contributes to Hypertension Caused by Na⁺-HCO₃⁻ Cotransporter Electrogenic 2 Deficiency.

Wen, D. et al. (2015) Hypertension. 66(1):68-74.

PubMed ID: 25941340 **Reactivity:** Mouse **Applications:** Western Blot

Tenofovir during pregnancy in rats: a novel pathway for programmed hypertension in the offspring.

Gois, PH. et al. (2014) J Antimicrob Chemother. 70(4):1094-105.

PubMed ID: 25492393 **Reactivity:** Rat **Applications:** Western Blot

Renal Sodium Transporters Are Increased in Urinary Exosomes of Cyclosporine-Treated Kidney Transplant Patients.

Esteva-Font, C. et al. (2014) Am J Nephrol. 39(6):528-35.

PubMed ID: 24942911 **Reactivity:** Human **Applications:** Western Blot

Phosphorylation decreases ubiquitylation of the thiazide-sensitive cotransporter NCC and subsequent clathrin-mediated endocytosis.

Rosenbaek, L.L., Kortenoeven, M.L.A., Aroankins, T.S. and Fenton, R.A. (2014) J Biol Chem. 289(19):13347-61.

PubMed ID: 24668812 **Reactivity:** Dog **Applications:** Western Blot

Hsp70 and Hsp90 Multichaperone Complexes Sequentially Regulate Thiazide-Sensitive Cotransporter ER-Associated Degradation and Biogenesis.

Donnelly, B.F. et al. (2013) J Biol Chem. 288(18):13124-35.

PubMed ID: 23482560 **Reactivity:** Dog **Applications:** Western Blot

Hsp70 and Hsp90 Multichaperone Complexes Sequentially Regulate Thiazide-Sensitive Cotransporter ER-Associated Degradation and Biogenesis.

Donnelly, B.F. et al. (2013) J Biol Chem. 288(18):13124-35.

PubMed ID: 23482560 **Reactivity:** Human **Applications:** Western Blot

Immunohistochemistry

?3 adrenergic receptor in the kidney may be a new player in sympathetic regulation of renal function.

Procino, G. et al. (2016) Kidney Int. [Epub ahead of print]

PubMed ID: 27206969 **Reactivity:** Mouse **Applications:** Immunohistochemistry

Characterization of a novel phosphorylation site in the sodium chloride cotransporter, NCC.

Rosenbaek, L.L., Assentoft, M., Pedersen, N.B., MacAulay, N. and Fenton, R.A. (2012) J Physiol. 590, 6121-6139.

PubMed ID: 22966159 **Reactivity:** Rat **Applications:** Immunohistochemistry

Other Citations

Reducing ?ENaC expression in kidney connecting tubule induces pseudohypoaldosteronism type 1 symptoms during K+ loading.

Poulsen, S.B. et al. (2015) Am J Physiol Renal Physiol. [Epub ahead of print].

PubMed ID: 26582762 **Reactivity:** Mouse

Phosphorylation decreases ubiquitylation of the thiazide-sensitive cotransporter NCC and subsequent clathrin-mediated endocytosis.

Rosenbaek, L.L., Kortenoeven, M.L.A., Aroankins, T.S. and Fenton, R.A. (2014) J Biol Chem. 289(19):13347-61.

PubMed ID: 24668812 **Reactivity:** Dog **Applications:** Electron Microscopy

Reviews

Based on validation through cited publications.



StressMarq Biosciences

June 15, 2016: