Product Datasheet

NHE3/SLC9A3 [p Ser552] Antibody (14D5) - BSA Free
NB110-81529SS

Unit Size: 0.025 ml

Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.

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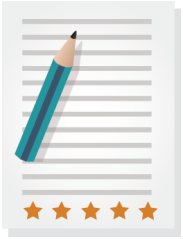
Updated 9/9/2025 v.20.1



NB110-81529SS

NHE3/SLC9A3 [p Ser552] Antibody (14D5) - BSA Free

Product Information

Unit Size	0.025 ml
Concentration	2 mg/ml
Storage	Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.
Clonality	Monoclonal
Clone	14D5
Preservative	0.05% Sodium Azide
Isotype	IgG2a
Purity	Protein G purified
Buffer	Tris-Glycine and 0.15M NaCl
Target Molecular Weight	85 kDa

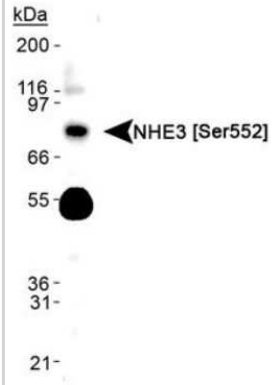
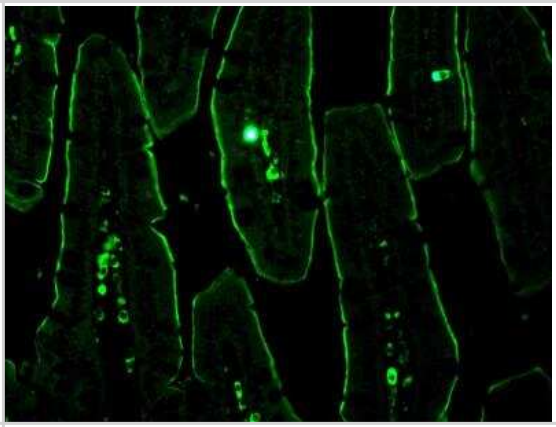
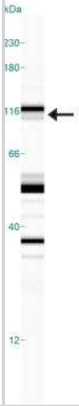
Product Description

Description	Novus Biologicals Knockout (KO) Validated Mouse NHE3/SLC9A3 [p Ser552] Antibody (14D5) - BSA Free (NB110-81529) is a monoclonal antibody validated for use in IHC, WB, ELISA, Flow, ICC/IF, Simple Western and IP. Anti-NHE3/SLC9A3 Antibody: Cited in 16 publications. All Novus Biologicals antibodies are covered by our 100% guarantee.
Host	Mouse
Gene ID	6550
Gene Symbol	SLC9A3
Species	Human, Mouse, Rat, Porcine, Opossum, Primate, Rabbit
Reactivity Notes	Porcine reactivity reported in scientific literature (PMID: 29510506).
Specificity/Sensitivity	This antibody detects NHE3 posphorylated at Serine 552, and does not cross-react with the non-phosphopeptide.
Immunogen	Synthetic peptide made to a region surrounding the Serine 552 portion of rat NHE3. [UniProt# P26433]

Product Application Details

Applications	Western Blot, Simple Western, ELISA, Flow Cytometry, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Immunoprecipitation, Knockdown Validated, Knockout Validated
Recommended Dilutions	Western Blot 1-5 ug/ml, Simple Western 1:1000, Flow Cytometry reported in scientific literature (PMID 21255452), ELISA 1:100-1:2000, Immunohistochemistry 1:50-1:1000, Immunocytochemistry/ Immunofluorescence 1:50-1:1000, Immunoprecipitation 1:10-1:500, Knockout Validated reported in scientific literature (PMID 31276916), Knockdown Validated reported in scientific literature (PMID 31276916)
Application Notes	In Western Blot, a band can be seen at approx. 85 kDa. In Simple Western only 10 - 15 uL of the recommended dilution is used per data point. See Simple Western Antibody Database for Simple Western validation: Tested in Hek293 lysate 0.5 mg/mL, separated by Size, antibody dilution of 1:1000, apparent MW was 81 kDa. Separated by Size-Wes, Sally Sue/Peggy Sue.

Images

Western Blot: NHE3/SLC9A3 [p Ser552] Antibody (14D5) [NB110-81529] - Detection of NHE3 [p Ser552] in human kidney lysate.	
Immunohistochemistry: NHE3/SLC9A3 [p Ser552] Antibody (14D5) [NB110-81529] - Mouse intestine, image courtesy of verified customer review.	
Simple Western: NHE3/SLC9A3 [p Ser552] Antibody (14D5) [NB110-81529] - Simple Western lane view shows a specific band for NHE3 in 0.5 mg/ml of Hek293 lysate. This experiment was performed under reducing conditions using the 12-230 kDa separation system.	

Publications

Rieg J, Odgaard L, Xue J et al. Sex differences in renal acid-base regulation. American Journal of Physiology - Renal Physiology 2025-09-27 [PMID: 41015430]

Vitzthum H, Koch M, Eckermann L et al. The AE4 transporter mediates kidney acid-base sensing Nature communications 2023-05-26 [PMID: 37236964] (WB, Mouse)

Sunilkumar S, Ford S Elevated glucose concentration in culture media decreases membrane trafficking of SGLT2 in LLC-PK1 cells via a cAMP/PKA-dependent pathway. Am J Physiol Cell Physiol 2019-01-06 [PMID: 30943059] (WB, Porcine)

Klinger S Segment specific effects of resveratrol on porcine small intestinal dipeptide absorption depend on the mucosal pH and are due to different mechanisms: Potential roles of different transport proteins and protein kinases J. Nutr. Biochem. 2020-07-29 [PMID: 32738496] (SDS-Page, WB, Porcine)

Koizumi M, Ueda K, Niimura F et al. Podocyte Injury Augments Intrarenal Angiotensin II Generation and Sodium Retention in a Megalin-Dependent Manner Hypertension 2019-09-01 [PMID: 31352823]

Hayasaki T, Ishimoto T, Doke T et al. Fructose increases the activity of sodium hydrogen exchanger in renal proximal tubules that is dependent on ketohexokinase J. Nutr. Biochem. 2019-06-08 [PMID: 31276916] (Knockdown Validated, Knockout Validated, WB, Porcine, Mouse)

Fenton RA, Poulsen SB, de la Mora Chavez S et al. Renal tubular NHE3 is required in the maintenance of water and sodium chloride homeostasis. kidney Int. 2017-08-01 [PMID: 28385297] (WB, Mouse)

Masuda T, Watanabe Y, Fukuda K et al. Unmasking a sustained negative effect of SGLT2 inhibition on body fluid volume in the rat Am. J. Physiol. Renal Physiol. 2018-05-23 [PMID: 29790389] (Rat)

Klinger S, Breves G. Resveratrol Inhibits Porcine Intestinal Glucose and Alanine Transport: Potential Roles of Na+/K+-ATPase Activity, Protein Kinase A, AMP-Activated Protein Kinase and the Association of Selected Nutrient Transport Proteins with Detergent Resistant Membranes Nutrients. 2018-03-03 [PMID: 29510506] (WB, Porcine)

Ozkucur N, Song B, Bola S et al. NHE3 phosphorylation via PkCEta marks the polarity and orientation of directionally migrating cells. Cell. Mol. Life Sci. 2014-05-01 [PMID: 24788043] (IP, WB, ICC/IF, Human)

Perike S, Ozkucur N, Sharma P et al. Phospho-NHE3 forms membrane patches and interacts with beta-actin to sense and maintain constant direction during cell migration. Exp. Cell Res. 2014-03-19 [PMID: 24657527] (IP, WB, Human)

Ozkucur N, Perike S, Sharma P et al. Persistent directional cell migration requires ion transport proteins as direction sensors and membrane potential differences in order to maintain directedness. BMC Cell Biol. 2011-01-01 [PMID: 21255452] (FLOW, IP, ICC/IF, WB, Human, Rat)

More publications at http://www.novusbio.com/NB110-81529

Procedures

Western Blot Protocol for NHE3 Antibody (NB110-81529)

Western Blot Protocol

1. Perform SDS-PAGE (4-12% MOPS) on samples to be analyzed, loading 30 ug of total protein per lane.
2. Transfer proteins to Nitrocellulose according to the instructions provided by the manufacturer of the transfer apparatus.
3. Rinse membrane with dH2O and then stain the blot using Ponceau S for 1-2 minutes to access the transfer of proteins onto the nitrocellulose membrane. Rinse the blot in water to remove excess stain and mark the lane locations and locations of molecular weight markers using a pencil.
4. Rinse the blot in TBS for approximately 5 minutes.
5. Block the membrane using 5% NFDM + 1% BSA in TBS + Tween, 1 hour at RT.
6. Rinse the membrane in dH2O and then wash the membrane in wash buffer [TBS + 0.1% Tween] 3 times for 10 minutes each.
7. Dilute the mouse anti-NHE3 primary antibody (NB 110-81529) in blocking buffer and incubate 1 hour at room temperature.
8. Rinse the membrane in dH2O and then wash the membrane in wash buffer [TBS + 0.1% Tween] 3 times for 10 minutes each.
9. Apply the diluted mouse-IgG HRP-conjugated secondary antibody in blocking buffer (as per manufacturers instructions) and incubate 1 hour at room temperature.
10. Wash the blot in wash buffer [TBS + 0.1% Tween] 3 times for 10 minutes each (this step can be repeated as required to reduce background).
11. Apply the detection reagent of choice in accordance with the manufacturers instructions (Pierce ECL).

Note: Tween-20 can be added to the blocking or antibody dilution buffer at a final concentration of 0.05-0.2%, provided it does not interfere with antibody-antigen binding.

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Limitations
This product is for research use only and is not approved for use in humans or in clinical diagnosis. Primary Antibodies are guaranteed for 1 year from date of receipt.

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