Product Datasheet

SLC34A1 Antibody (10B1.3E9) - BSA Free
NBP2-42216

Unit Size: 0.1 mg

Store at -20C. Avoid freeze-thaw cycles.

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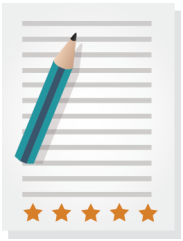
Updated 10/23/2024 v.20.1



NBP2-42216

SLC34A1 Antibody (10B1.3E9) - BSA Free

Product Information

Unit Size	0.1 mg
Concentration	1.0 mg/ml
Storage	Store at -20C. Avoid freeze-thaw cycles.
Clonality	Monoclonal
Clone	10B1.3E9
Preservative	0.02% Sodium Azide
Isotype	IgG1 Kappa
Purity	Protein G purified
Buffer	PBS
Target Molecular Weight	68.9 kDa

Product Description

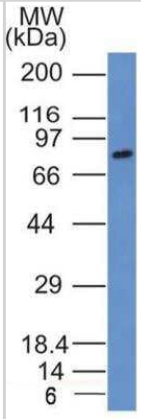
Host	Mouse
Gene ID	6569
Gene Symbol	SLC34A1
Species	Human, Mouse
Marker	Tubulointerstitium Marker
Immunogen	Partial synthetic peptide made to an internal portion of the human SLC34A1 protein (between amino acids 25-150) [UniProt Q06495]

Product Application Details

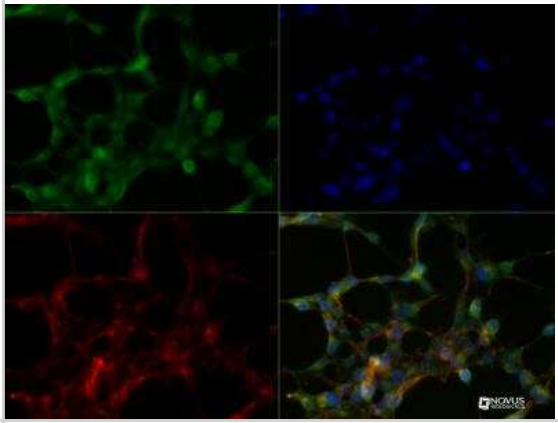
Applications	Western Blot, Flow Cytometry, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Paraffin, Immunoprecipitation
Recommended Dilutions	Western Blot 1:500, Flow Cytometry 1:1000, Immunohistochemistry 1:50-1:100, Immunocytochemistry/ Immunofluorescence 1:50, Immunoprecipitation reported in scientific literature (PMID 35307350), Immunohistochemistry-Paraffin 1:50-1:100
Application Notes	SLC34A1 is a 639 amino acids long protein with predicted molecular weight of 68.9 kDa, however, because of glycosylation, the processed protein may show up at higher than predicted molecular weight position on Western blot.

Images

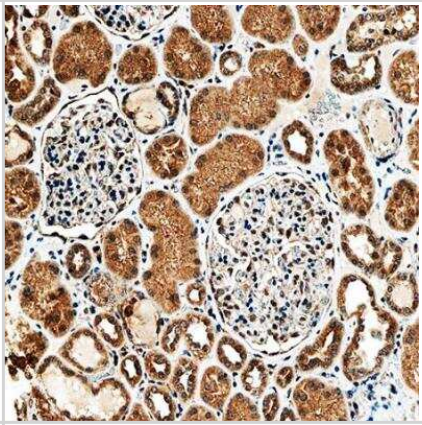
Western Blot: SLC34A1 Antibody (10B1.3E9) [NBP2-42216] - WB detection of SLC34A1 /NPTIIa protein in a lysate of mouse thymus using SLC34A1 clone 10B1.3E9 at its 1:500 dilution. The antibody detected a single specific band at ~80 kDa representing the glycosylated form of SLC34A1 protein.



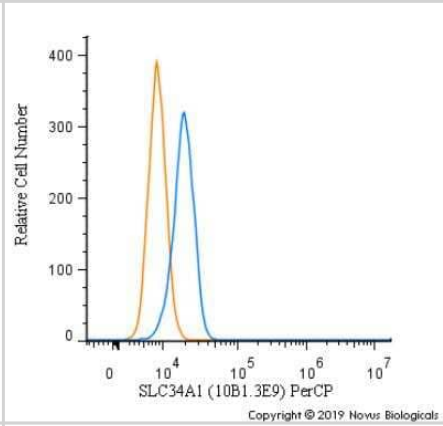
Immunocytochemistry/Immunofluorescence: SLC34A1 Antibody (10B1.3E9) [NBP2-42216] - Hek293 cells were fixed for 10 minutes using 10% formalin and then permeabilized using 1X TBS + 0.5% Triton-X100. The cells were incubated with hSLC34A1 (10B1.3E9) at a 1:50 dilution overnight at 4 degrees Celsius and detected with Dylight 488 (Green). Actin was detected with Phalloidin 568 (Red). Nuclei were detected with DAPI (Blue). Cells were imaged using a 40X objective.



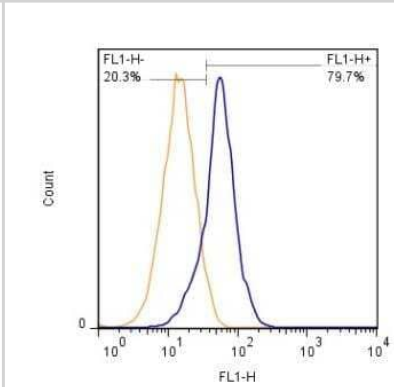
Immunohistochemistry-Paraffin: SLC34A1 Antibody (10B1.3E9) [NBP2-42216] - IHC analysis of a formalin-fixed and paraffin-embedded tissue section of human normal kidney using SLC34A1 antibody (clone 10B1.3E9) at 1:75 dilution. The epithelial cells of various renal ducts and tubules depicted very nice membrane-cytoplasmic SLC34A1 immunostaining while the Bowman's capsule and the nuclei of cells were largely negative for SLC34A1 protein.

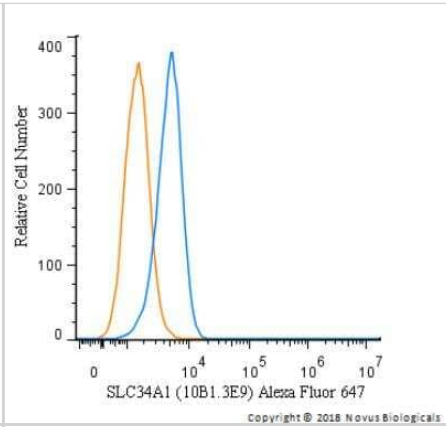
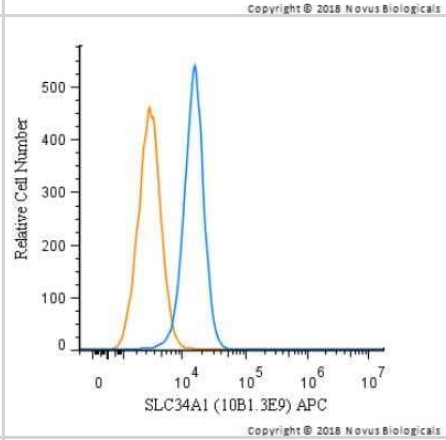
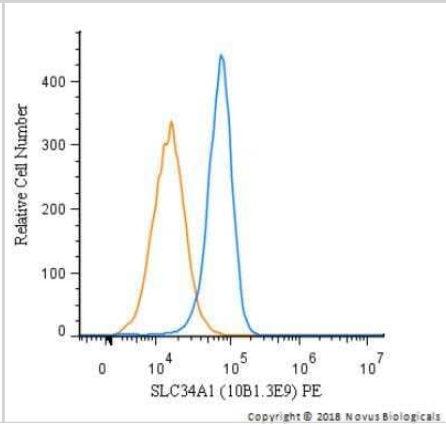


Flow Cytometry: SLC34A1 Antibody (10B1.3E9) [NBP2-42216] - An intracellular stain was performed on Hek293 cells with SLC34A1 Antibody [10B1.3E9] NBP2-42216PCP (blue) and a matched isotype control (orange). Cells were fixed with 4% PFA and then permeablized with 0.1% saponin. Cells were incubated in an antibody dilution of 10 ug/mL for 30 minutes at room temperature. Both antibodies were conjugated to PerCP.



Flow Cytometry: SLC34A1 Antibody (10B1.3E9) [NBP2-42216] - FLOW detection of SLC34A1 protein on HEK293 cells - After fixation and permeabilization, 2 x 10^6 cells/ml were stained using SLC34A1 antibody (clone 10B1.3E9) at 1:1000 dilution. Signal was developped using GtxMs dylight 488 secondary (blue peak). Shown with secondary control (orange peak). Data was acquired on BD FACSCalibur.



Flow Cytometry: SLC34A1 Antibody (10B1.3E9) [NBP2-42216] - An intracellular stain was performed on Hek293 cells with SLC34A1 Antibody [10B1.3E9] NBP2-42216AF647 (blue) and a matched isotype control (orange). Cells were fixed with 4% PFA and then permeabilized with 0.1% saponin. Cells were incubated in an antibody dilution of 5 ug/mL for 30 minutes at room temperature. Both antibodies were conjugated to Alexa Fluor 647.	
Flow Cytometry: SLC34A1 Antibody (10B1.3E9) [NBP2-42216] - An intracellular stain was performed on Hek293 cells with SLC34A1 Antibody [10B1.3E9] NBP2-42216APC (blue) and a matched isotype control (orange). Cells were fixed with 4% PFA and then permeabilized with 0.1% saponin. Cells were incubated in an antibody dilution of 1 ug/mL for 30 minutes at room temperature. Both antibodies were conjugated to Allophycocyanin.	
Flow Cytometry: SLC34A1 Antibody (10B1.3E9) [NBP2-42216] - An intracellular stain was performed on Hek293 cells with SLC34A1 Antibody [10B1.3E9] NBP2-42216PE (blue) and a matched isotype control (orange). Cells were fixed with 4% PFA and then permeabilized with 0.1% saponin. Cells were incubated in an antibody dilution of 2.5 ug/mL for 30 minutes at room temperature. Both antibodies were conjugated to Phycoerythrin.	

Publications

Qian J, Zhong J, Liu S Et Al. alpha-Klotho, Plasma Asymmetrical Dimethylarginine, and Kidney Disease Progression Kidney Med 2021-12-23 [PMID: 34939007]

Friedman PA, Sneddon WB, Mamonova T et al. RGS14 regulates hormone-sensitive NPT2A-mediated renal phosphate uptake via binding to the NHERF1 scaffolding protein The Journal of biological chemistry 2022-03-17 [PMID: 35307350] (IP, Human)

Bayer J, Vaghela R, Drechsler S et al. The bone is the major source of high circulating intact fibroblast growth factor-23 in acute murine polymicrobial sepsis induced by cecum ligation puncture PloS one 2021-05-14 [PMID: 33989306] (WB, Mouse)

Dhillon P, Park J, Hurtado Del Pozo C et al. The Nuclear Receptor ESRRA Protects from Kidney Disease by Coupling Metabolism and Differentiation Cell metabolism 2020-12-01 [PMID: 33301705] (IF/IHC)

Martins JS, Liu ES, Sneddon WB, et al 1,25-dihydroxyvitamin D maintains brush border membrane NaPi2a and attenuates phosphaturia in Hyp mice Endocrinology 2019-06-25 [PMID: 31237611]

Procedures

Western Blot protocol for SLC34A1 Antibody (NBP2-42216)

Reagents needed:
a. Washing Buffer: Tris Buffer Saline with 0.01% of tween 20).
b. Blocking Buffer: 5% skimmed milk powder in washing buffer).
c. Secondary antibody, Horseradish peroxidase conjugated.
d. Chemiluminescent solution (SuperSignal WestPicoTM, Pierce).

Western blot Method:
1. Perform SDS-PAGE using PVDF membrane. Cut into strips.
2. Activate strips with methanol by dipping them into methanol for 5 min.
3. Discard the methanol and take fresh methanol to repeat step b.
4. Let the strips dry, and then add blocking solution and incubate at RT in a shaker for 30-45 minutes.
5. Dilute primary antibody in blocking buffer. Incubate the number of strips required with the diluted primary antibody at room temperature for 2 hours in a shaker.
6. Wash strips two times with washing buffer at 30 minutes intervals.
7. Dilute HRP conjugated secondary antibody in blocking buffer. Add diluted secondary antibody to the membrane strips and incubate for exactly 1 hour while shaking at RT.
8. Wash the strips with washing buffer for 2-3 hours with 3 to 4 changes on a shaker. This helps in reducing the back ground staining.
9. Prepare the chemiluminescent solution (SuperSignal WestPicoTM) by mixing solution A and Solution B at 1:1. Mix well. Soak the strip in the chemiluminescent solution; keep for 3-5 minutes under constant shaking.
10. Expose the membrane to a sheet of film and develop.

Immunocytochemistry/Immunofluorescence protocol for SLC34A1 Antibody (NBP2-42216)

Immunocytochemistry Protocol

Culture cells to appropriate density in 35 mm culture dishes or 6-well plates.

1. Remove culture medium and add 10% formalin to the dish. Fix at room temperature for 30 minutes.
2. Remove the formalin and add ice cold methanol. Incubate for 5-10 minutes.
3. Remove methanol and add washing solution (i.e. PBS). Be sure to not let the specimen dry out. Wash three times for 10 minutes.
4. To block nonspecific antibody binding incubate in 10% normal goat serum from 1 hour to overnight at room temperature.
5. Add primary antibody at appropriate dilution and incubate at room temperature from 2 hours to overnight at room temperature.
6. Remove primary antibody and replace with washing solution. Wash three times for 10 minutes.
7. Add secondary antibody at appropriate dilution. Incubate for 1 hour at room temperature.
8. Remove antibody and replace with wash solution, then wash for 10 minutes. Add Hoechst 33258 to wash solution at 1:25,0000 and incubate for 10 minutes. Wash a third time for 10 minutes.
9. Cells can be viewed directly after washing. The plates can also be stored in PBS containing Azide covered in Parafilm (TM). Cells can also be cover-slipped using Fluoromount, with appropriate sealing.

*The above information is only intended as a guide. The researcher should determine what protocol best meets their needs. Please follow safe laboratory procedures.

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Products Related to NBP2-42216

NBP2-08042	SLC34A1 Overexpression Lysate
HAF007	Goat anti-Mouse IgG Secondary Antibody [HRP]
NB720-B	Rabbit anti-Mouse IgG (H+L) Secondary Antibody [Biotin]
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