

Product Datasheet

Sodium Potassium ATPase Beta 1 Antibody (464.8 (also known as 8A)) - BSA Free NB300-147

Unit Size: 0.1 ml

Aliquot and store at -20C or -80C. Avoid freeze-thaw cycles.

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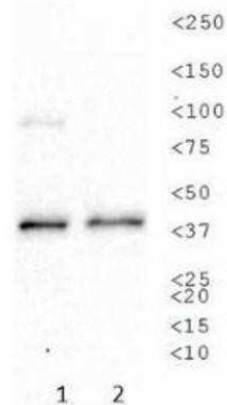
NB300-147

Sodium Potassium ATPase Beta 1 Antibody (464.8 (also known as 8A)) - BSA Free

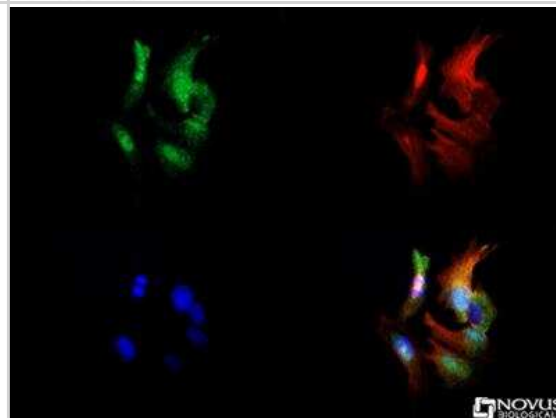
Product Information	
Unit Size	0.1 ml
Concentration	This product is unpurified. The exact concentration of antibody is not quantifiable.
Storage	Aliquot and store at -20C or -80C. Avoid freeze-thaw cycles.
Clonality	Monoclonal
Clone	464.8 (also known as 8A)
Preservative	0.02% Sodium Azide
Isotype	IgG2a Kappa
Purity	Unpurified
Buffer	Ascites
Product Description	
Description	Novus Biologicals Mouse Sodium Potassium ATPase Beta 1 Antibody (464.8 (also known as 8A)) - BSA Free (NB300-147) is a monoclonal antibody validated for use in IHC, WB and ICC/IF. Anti-Sodium Potassium ATPase Beta 1 Antibody: Cited in 16 publications. All Novus Biologicals antibodies are covered by our 100% guarantee.
Host	Mouse
Gene ID	481
Gene Symbol	ATP1B1
Species	Human, Rat, Porcine, Bovine, Canine, Chicken, Hamster, Rabbit, Xenopus, Mouse (Negative)
Reactivity Notes	Chicken reactivity reported in scientific literature (PMID: 31356813).
Marker	Plasma Membrane Marker
Specificity/Sensitivity	This is specific for Na,K-ATPase beta 1 subunit.
Immunogen	Purified Sodium Potassium ATPase Beta 1 from rabbit renal outer medulla. [UniProt# Q9TT37]
Product Application Details	
Applications	Western Blot, Immunohistochemistry-Paraffin, Immunocytochemistry/Immunofluorescence, Immunohistochemistry
Recommended Dilutions	Western Blot 1:1000-1:5000, Immunohistochemistry, Immunocytochemistry/Immunofluorescence 1:500-1:1000, Immunohistochemistry-Paraffin reported in scientific literature
Application Notes	This antibody may have a broad banding pattern, typical of glycosylated proteins, at ~35-40 kDa. One may see multiple bands migrating between 35-65 kDa. Do not boil the sample prior to loading on the gel for Western Blot (60 degrees Celsius appears to work fine).

Images

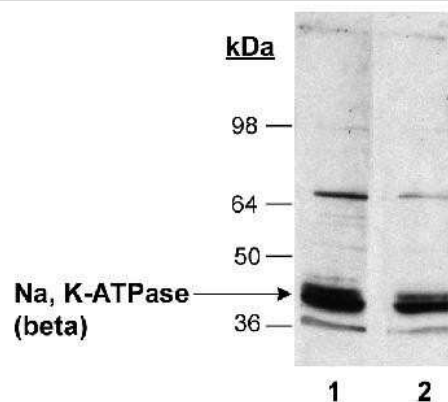
Western Blot: Sodium Potassium ATPase Beta 1 Antibody (464.8 (also known as 8A)) [NB300-147] - Western blot analysis of Sodium Potassium ATPase Beta 1 expression in 1) SK-BR-3 and 2) A-431 whole cell lysates using NB300-147.



Immunocytochemistry/Immunofluorescence: Sodium Potassium ATPase Beta 1 Antibody (464.8 (also known as 8A)) [NB300-147] - Sodium Potassium ATPase Beta 1 antibody was tested in HepG2 cells with Dylight 488 (green). Nuclei and alpha-tubulin were counterstained with DAPI (blue) and Dylight 550 (red).



Western Blot: Sodium Potassium ATPase Beta 1 Antibody (464.8 (also known as 8A)) [NB300-147] - Detection of Na, K-ATPase (beta) in rat kidney homogenates (20 ug) using NB 300-147. Lane 1: 1:2,500 primary. Lane 2: 1:5,000 primary.



Publications

Harich, OO;Gavriliuc, OI;Ordodi, VL;Tirziu, A;Paunescu, V;Panaitescu, C;Bojin, MF; In Vitro Study of the Multimodal Effect of Na⁺/K⁺ ATPase Blocker Ouabain on the Tumor Microenvironment and Malignant Cells Biomedicines 2023-08-05 [PMID: 37626702] (Western Blot, Porcine)

Sampaio L, Shiju T, Hilgert G Et al. Descemet's membrane injury and regeneration, and posterior corneal fibrosis in rabbits Experimental Eye Research 2021-11-01 [PMID: 34736886] (IF/IHC, Rabbit)

Soltysik K, Ohsaki Y, Tatematsu T et al. Nuclear lipid droplets form in the inner nuclear membrane in a seipin-independent manner The Journal of cell biology 2021-01-04 [PMID: 33315072]

Shimamoto S, Nakashima K, Kamimura R et al. Insulin acutely increases glucose transporter 1 on plasma membranes and glucose uptake in an AKT-dependent manner in chicken adipocytes Gen. Comp. Endocrinol. 2019-07-26 [PMID: 31356813] (WB, Chicken)

Tokhtaeva E, Sun H, Deiss-Yehiely N et al. FXYD5 O-glycosylated ectodomain impairs adhesion by disrupting cell-cell trans-dimerization of Na_k-ATPase beta1 subunits. J. Cell. Sci. 2016-05-03 [PMID: 27142834] (WB, Human)

Tang WH, Stitham J, Gleim S et al. Glucose and collagen regulate human platelet activity through aldose reductase induction of thromboxane. J Clin Invest 2011-11-01 [PMID: 22005299] (Human)

Carmosino Monica, Torretta Silvia, Procino Giuseppe et al. Na⁺/K⁺-ATPase beta1-subunit is recruited in Na-K-2Cl co-transporter isoform 2 multiprotein complexes in rat kidneys: possible role in blood pressure regulation. J Hypertens. 2014-09-01 [PMID: 24927069] (Rat)

Tokhtaeva E, Capri J, Marcus EA et al. Septin dynamics are essential for exocytosis J. Biol. Chem. 2015-01-09 [PMID: 25575596] (WB, Human)

Gong H, Sun J, Xue W et al. Protective effect of truncated Na⁺/K⁺-ATPase beta on ischemia/reperfusion-induced renal injury in rats. Exp. Biol. Med. (Maywood) 2014-04-15 [PMID: 24737734] (WB, Human)

Tokhtaeva E, Sachs G, Sun H et al. Identification of the amino acid region involved in the intercellular interaction between the beta 1 subunits of Na/K-ATPase J Cell Sci 2012-03-15 [PMID: 22328500] (WB, Rat, Canine)

Mastrodonato M, Calamita G, Rossi R et al. Expression of H⁺,K⁺-ATPase Glycopattern Analysis in the Gastric GIs of Rana esculenta. J Histochem Cytochem :jhc2008.952234. 2008-01-01 [PMID: 19001639] (WB, IHC-P, Xenopus)

Pessach, Itai et al. The C-terminal flavin domain of gp91phox bound to plasma membranes of granulocyte-like X-CGD PLB-985 cells is sufficient to anchor cytosolic oxidase components and support NADPH oxidase-associated diaphorase activity independent of cytosolic phospholipase A2 regulation. J Leukoc Biol;80(3):630-9. 2006-09-01 [PMID: 16844764] (WB, Human)

More publications at <http://www.novusbio.com/NB300-147>

Procedures

Western Blot protocol for Sodium Potassium ATPase Beta 1 Antibody (NB300-147)

1. Run ~20 ug of rat kidney homogenate on a 7.5% SDS-PAGE gel.
2. Transfer protein to the membrane using a Tris-Glycine/Methanol buffer.
3. Block membrane with TBST/5% NFDM for 30 min. at room temperature (~23-27 degrees C).
4. Wash membrane twice, for 5 minutes each, with TBST.
5. Incubate membrane with 1:2,500 dilution of NB300-147 (anti-Na,K-ATPase), diluted in TBST, for 1 hour at room temperature.
6. Wash membrane once for 15 minutes, then four times for 5 minutes each, with TBST.
7. Incubate membrane with 1:15,000 dilution of goat anti-mouse IgG-HRP [(Pierce) stocked 1:2 in glycerol], diluted in TBST, for 1 hour at room temperature.
8. Wash membrane once for 15 minutes, then four times for 5 minutes each, with TBST.
9. Detect cross-reacting proteins using SuperSignal West Pico Chemiluminescent substrate (Pierce), diluted according to manufacturer's guidelines.

*NOTE: Do not boil the protein samples, as boiling causes aggregation of the Na,K-ATPase. The aggregate band will appear at ~150 kDa on Western Blots.

Immunocytochemistry/Immunofluorescence protocol for Sodium Potassium ATPase Beta 1 Antibody (NB300-147)

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 1:25,000 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 NB300-147

NBL1-07811	Sodium Potassium ATPase Beta 1 Overexpression Lysate
NBP2-33376H	Blue Marker Antibody (6F4-F6) [HRP]
HAF007	Goat anti-Mouse IgG Secondary Antibody [HRP]
NB7539	Goat anti-Mouse IgG (H+L) Secondary Antibody [HRP]
NBP1-96981-0.5mg	Mouse IgG2a Kappa Isotype Control (M2AK)

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