

# Product Datasheet

## Sodium Potassium ATPase Alpha 3 Antibody (XVIF9-G10) - BSA Free NB300-540

Unit Size: 100ug

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

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**NB300-540****Sodium Potassium ATPase Alpha 3 Antibody (XVIF9-G10) - BSA Free**

<b>Product Information</b>	
<b>Unit Size</b>	100ug
<b>Concentration</b>	1 mg/ml
<b>Storage</b>	Store at -20C. Avoid freeze-thaw cycles.
<b>Clonality</b>	Monoclonal
<b>Clone</b>	XVIF9-G10
<b>Preservative</b>	0.05% Sodium Azide
<b>Isotype</b>	IgG1
<b>Purity</b>	Protein A purified
<b>Buffer</b>	0.02 M potassium phosphate (pH 7.2), 0.15 M NaCl
<b>Target Molecular Weight</b>	111.749 kDa

<b>Product Description</b>	
<b>Description</b>	Novus Biologicals Mouse Sodium Potassium ATPase Alpha 3 Antibody (XVIF9-G10) - BSA Free (NB300-540) is a monoclonal antibody validated for use in IHC, WB, Flow, ICC/IF and Simple Western. Anti-Sodium Potassium ATPase Alpha 3 Antibody: Cited in 18 publications. All Novus Biologicals antibodies are covered by our 100% guarantee.
<b>Host</b>	Mouse
<b>Gene ID</b>	478
<b>Gene Symbol</b>	ATP1A3
<b>Species</b>	Human, Mouse, Rat, Bovine, Canine, Guinea Pig, Primate, Rabbit, Sheep
<b>Reactivity Notes</b>	Please note that this antibody is reactive to Mouse and derived from the same host, Mouse. Additional Mouse on Mouse blocking steps may be required for IHC and ICC experiments. Please contact Technical Support for more information.
<b>Marker</b>	Plasma Membrane Marker
<b>Specificity/Sensitivity</b>	Detects sodium / potassium ATPase. This is specific for the alpha-3 subunit.
<b>Immunogen</b>	Canine cardiac microsomes.

<b>Product Application Details</b>	
<b>Applications</b>	Western Blot, Simple Western, Immunohistochemistry-Paraffin, Flow Cytometry, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Frozen, Block/Neutralize, Single Cell Western
<b>Recommended Dilutions</b>	Western Blot 1 ug/mL, Simple Western 1:100, Flow Cytometry 1 ug / 10 <sup>6</sup> cells, Immunohistochemistry 1:10 - 1:500, Immunocytochemistry/ Immunofluorescence 5 ug/mL, Immunohistochemistry-Paraffin 1:10 - 1:500, Immunohistochemistry-Frozen 3 ug/mL, Single Cell Western 100 ug/mL, Block/Neutralize



**Application Notes**

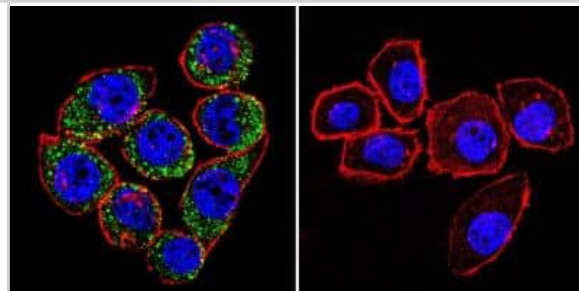
May be useful in WB, IF, and IHC-Fr. WB: Detects an approx. 110 kDa protein representing the alpha-3 subunit of the sodium/potassium ATPase from canine skeletal muscle extract. IHC: Staining of sodium / potassium ATPase in rat retina yields a pattern consistent with plasma membrane localization.

In Simple Western only 10 - 15 uL of the recommended dilution is used per data point.

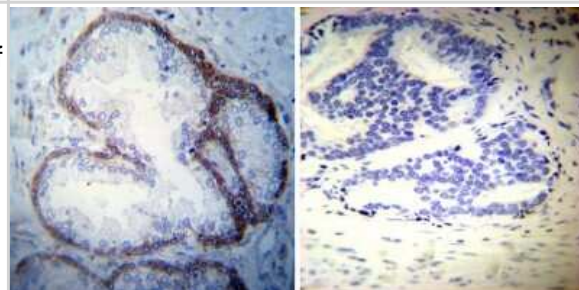
See [Simple Western Antibody Database](#) for Simple Western validation: Tested in Human Brain lysate 0.5 mg/mL, separated by Size, antibody dilution of 1:100, apparent MW was 136 kDa. Separated by Size-Wes, Sally Sue/Peggy Sue. Single Cell Western validated using live primary humna cortical neurons.

**Images**

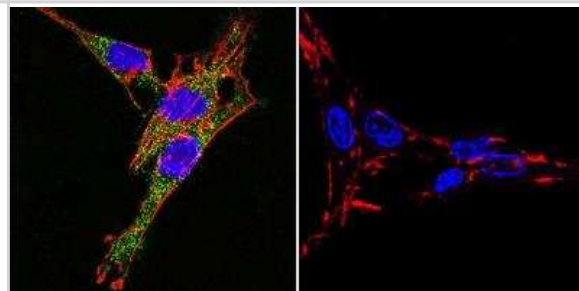
Immunocytochemistry/Immunofluorescence: Sodium Potassium ATPase Alpha 3 Antibody (XVIF9-G10) [NB300-540] - Sodium/Potassium ATPase alpha-3 staining (green), F-Actin staining with Phalloidin (red) and nuclei with DAPI (blue) in U251 glioma cells is shown. Cells were grown on chamber slides and fixed with formaldehyde prior to staining. Cells were probed without (control) or with or an antibody recognizing Sodium/Potassium ATPase alpha-3 at a dilution of 1:20 over night at 4C, washed with PBS and incubated with a DyLight-488 conjugated.



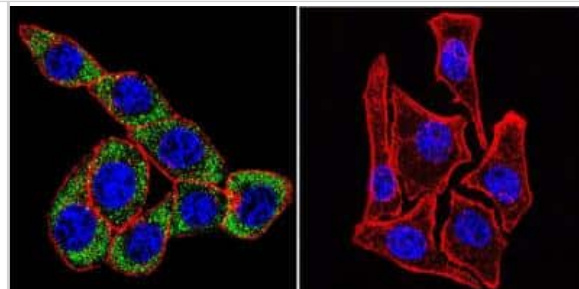
Immunohistochemistry-Paraffin: Sodium Potassium ATPase Alpha 3 Antibody (XVIF9-G10) [NB300-540] - Both normal and cancer biopsies of deparaffinized Human prostate carcinoma tissues.



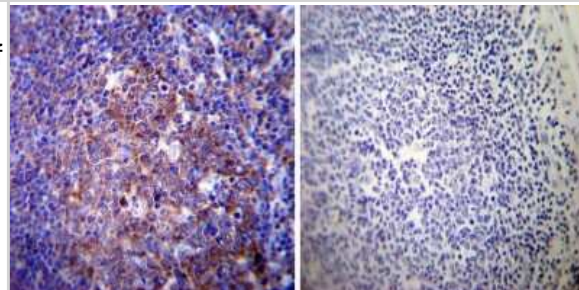
Immunocytochemistry/Immunofluorescence: Sodium Potassium ATPase Alpha 3 Antibody (XVIF9-G10) [NB300-540] - Analysis of Sodium/Potassium ATPase alpha-3 using Sodium/Potassium ATPase alpha-3 Monoclonal antibody (XVIF9-G10) shows staining in C6 glioma cells. Sodium/Potassium ATPase alpha-3 staining (green), F-Actin staining with Phalloidin (red) and nuclei with DAPI (blue) is shown. Cells were grown on chamber slides and fixed with formaldehyde prior to staining. Cells were probed without (control) or with or an antibody recognizing Sodium/Potassium ATPase alpha-3 at a dilution of 1:20 over night at 4C, washed with PBS and incubated with a DyLight-488 conjugated.



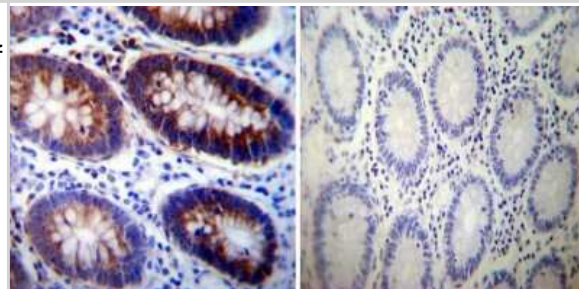
Immunocytochemistry/Immunofluorescence: Sodium Potassium ATPase Alpha 3 Antibody (XVIF9-G10) [NB300-540] - Sodium/Potassium ATPase alpha-3 staining (green), F-Actin staining with Phalloidin (red) and nuclei with DAPI (blue) in HeLa cells is shown. Cells were grown on chamber slides and fixed with formaldehyde prior to staining. Cells were probed without (control) or with or an antibody recognizing Sodium/Potassium ATPase alpha-3 at a dilution of 1:20 over night at 4C, washed with PBS and incubated with a DyLight-488 conjugated.



Immunohistochemistry-Paraffin: Sodium Potassium ATPase Alpha 3 Antibody (XVIF9-G10) [NB300-540] - Both normal and cancer biopsies of deparaffinized Human tonsil tissues.



Immunohistochemistry-Paraffin: Sodium Potassium ATPase Alpha 3 Antibody (XVIF9-G10) [NB300-540] - Both normal and cancer biopsies of deparaffinized Human colon tissues.



Simple Western: Sodium Potassium ATPase Alpha 3 Antibody (XVIF9-G10) [NB300-540] - Simple Western lane view shows a specific band for Sodium Potassium ATPase Alpha 3 in 0.5 mg/ml of Human Brain lysate. This experiment was performed under reducing conditions using the 12-230 kDa separation system.



## Publications

Zakharova IO, Bayunova LV, Zorina II et al. Insulin and  $\alpha$ -Tocopherol Enhance the Protective Effect of Each Other on Brain Cortical Neurons under Oxidative Stress Conditions and in Rat Two-Vessel Forebrain Ischemia/Reperfusion Injury International Journal of Molecular Sciences 2021-10-29 [PMID: 34769198]

Lazar AM, Irannejad R, Baldwin TA et al. G protein-regulated endocytic trafficking of adenylyl cyclase type 9 eLife 2020-06-09 [PMID: 32515353]

Vivek Mahadevan, Jessica C. Pressey, Brooke A. Acton, Pavel Uvarov, Michelle Y. Huang, Jonah Chevrier, Andrew Puchalski, Caiwei M. Li, Evgueni A. Ivakine, Matti S. Airaksinen, Eric Delpire, Roderick R. McInnes, Melanie A. Woodin Kainate Receptors Coexist in a Functional Complex with KCC2 and Regulate Chloride Homeostasis in Hippocampal Neurons Cell reports 2019-01-14 [PMID: 24910435]

Ferrer-Ferrer M, Jia S, Kaushik R et al. Mice deficient in synaptic protease neurotrypsin show impaired spaced long-term potentiation and blunted learning-induced modulation of dendritic spines Cellular and molecular life sciences : CMLS 2023-03-05 [PMID: 36871239] (Immunohistochemistry-Frozen, Mouse)

Pfeiffer R, Beron J, Verrey F. Regulation of Na<sup>+</sup> pump function by aldosterone is alpha-subunit isoform specific. J Physiol 1999-04-14 [PMID: 10200415]

Ferrer-Ferrer M, Jia S, Kaushik R et al. Disturbance in Hebbian-like spinogenesis blunted learning-induced modulation in the number and spatial distribution of dendritic spines Research Square 2022-06-24 (IF/IHC, Mouse)

Ferrer-Ferrer M, Jia S, Kaushik R et al. Disturbance in Hebbian-like spinogenesis blunted learning-induced modulation in the number and spatial distribution of dendritic spines Research Square Jun 24 2022 12:00AM (IHC, Mouse)

Nordstrom CK, Danckwardt-Lilliestrom N, Liu W, Rask-Andersen H Reversed polarization of Na/K-ATPase-a sign of inverted transport in the human endolymphatic sac: a super-resolution structured illumination microscopy (SR-SIM) study Cell Tissue Res. 2019-11-12 [PMID: 31713726]

Liu W, Luque M, Glueckert R et al. Expression of Na/K-ATPase subunits in the human cochlea: a confocal and super-resolution microscopy study with special reference to auditory nerve excitation and cochlear implantation Ups. J. Med. Sci. 2019-08-01 [PMID: 31460814]

Halbert D, Domenyuk V, Spetzler D et al. Aptamers and uses thereof United States Patent Application US 9958448 B2 2018-01-01

Coleman LG, Zou J, Crews FT Microglial-derived miRNA let-7 and HMGB1 contribute to ethanol-induced neurotoxicity via TLR7 J Neuroinflammation Jan 25 2017 12:00AM [PMID: 28118842] (FLOW, ELISA, Human) J Neuroinflammation. 2017-01-25 [PMID: 28118842] (FLOW, Human)

### Details:

Citation using the Alexa Fluor 488 form of this antibody.

Ivakine EA, Acton BA, Mahadevan V et al. Neto2 is a KCC2 interacting protein required for neuronal Cl<sup>-</sup> regulation in hippocampal neurons. Proc Natl Acad Sci U S A 2013-02-26 [PMID: 23401525] (WB, Mouse)

More publications at <http://www.novusbio.com/NB300-540>



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### Products Related to NB300-540

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NBL1-07809	Sodium Potassium ATPase Alpha 3 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]
NBP1-97005-0.5mg	Mouse IgG1 Isotype Control (MG1)

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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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