

# Product Datasheet

## ATG9A Antibody - BSA Free

### NB110-56893

Unit Size: 0.1 ml

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

[www.novusbio.com](http://www.novusbio.com)



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**NB110-56893**

ATG9A Antibody - BSA Free

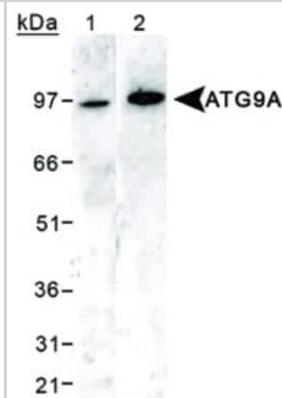
Product Information	
Unit Size	0.1 ml
Concentration	1.0 mg/ml
Storage	Aliquot and store at -20C or -80C. Avoid freeze-thaw cycles.
Clonality	Polyclonal
Preservative	0.02% Sodium Azide
Isotype	IgG
Purity	Immunogen affinity purified
Buffer	PBS
Target Molecular Weight	95 kDa

Product Description	
Description	Novus Biologicals Rabbit ATG9A Antibody - BSA Free (NB110-56893) is a polyclonal antibody validated for use in IHC, WB, Flow, ICC/IF and IP. Anti-ATG9A Antibody: Cited in 34 publications. All Novus Biologicals antibodies are covered by our 100% guarantee.
Host	Rabbit
Gene ID	79065
Gene Symbol	ATG9A
Species	Human, Mouse, Rat, Alligator, Bovine, Chicken, Drosophila, Primate
Reactivity Notes	Drosophila reactivity reported in scientific literature (PMID: 26353861). Use in Alligator reported in scientific literature (PMID:32061056).
Immunogen	A synthetic peptide made to a region within the C-terminus of human ATG9A (between residues 750-839). [Swiss-Prot: Q7Z3C6].

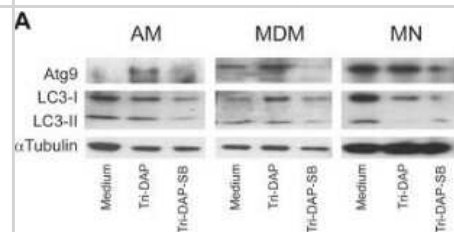
Product Application Details	
Applications	Western Blot, Immunohistochemistry-Paraffin, Flow Cytometry, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Frozen, Immunoprecipitation
Recommended Dilutions	Western Blot 2 ug/ml, Flow Cytometry, Immunohistochemistry 1:100-1:250, Immunocytochemistry/ Immunofluorescence reported in scientific literature (PMID 24705551), Immunoprecipitation reported in scientific literature (PMID 27316455), Immunohistochemistry-Paraffin 1:100-1:250, Immunohistochemistry-Frozen reported in scientific literature (PMID 31200728)
Application Notes	In Western blot, this antibody recognizes a band at ~95 kDa, representing ATG9A protein. Boiling samples prior to running the gel may affect the protein.

## Images

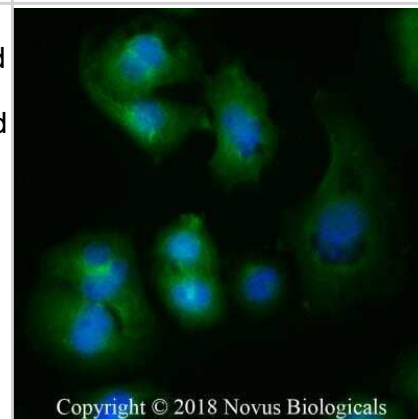
Western Blot: ATG9A Antibody [NB110-56893] - Detection of ATG9A protein in HEK293 lysates using NB110-56893. (1) siRNA ATG9A knockdown and (2) wildtype ATG9A.



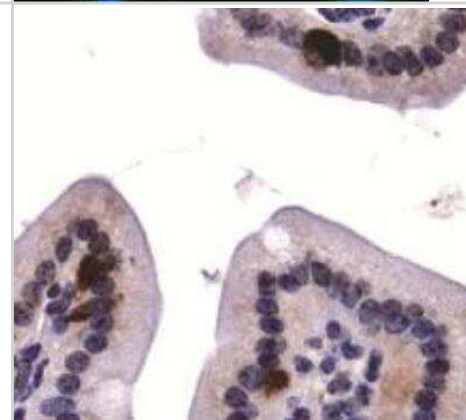
Western Blot: ATG9A Antibody [NB110-56893] - After stimulation with the NOD1 ligand, macrophages increased their expression of autophagy proteins Atg9, LC3 and IRGM. Alveolar macrophages (AMs), monocyte-derived macrophages (MDMs) and monocytes (MNs) were incubated in the presence of 5 ug/ml of Tri-DAP for 24 h. Cells were pre-incubated with Rip2/p38 inhibitor SB203580 (SB) for 30 min prior to Tri-DAP stimulation to block NOD1-mediated responses, as indicated. Atg9 and LC3 proteins were measured in the cytosolic fractions by western blot analysis. Image collected and cropped by CiteAb from the following publication (<https://bmcpulmed.biomedcentral.com/articles/10.1186/1471-2466-14-152>), licensed under a CC-BY license.



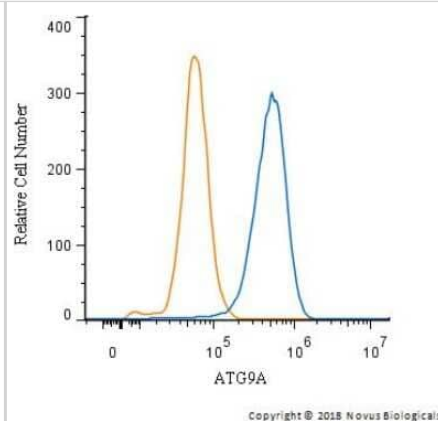
Immunocytochemistry/Immunofluorescence: ATG9A Antibody [NB110-56893] - Neuro2a cells were fixed for 10 minutes using 10% formalin and then permeabilized for 5 minutes using 1X PBS + 0.05% Triton X-100. The cells were incubated with anti-ATG9A at 2 ug/ml overnight at 4C and detected with an anti-rabbit DyLight 488 (Green) at a 1:500 dilution. Nuclei were counterstained with DAPI (Blue). Cells were imaged using a 40X objective.



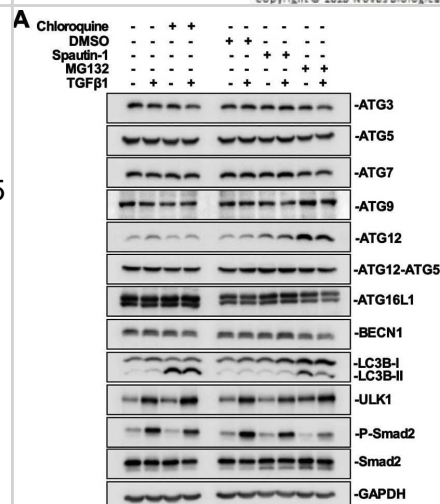
Immunohistochemistry: ATG9A Antibody [NB110-56893] - Staining in mouse intestine.



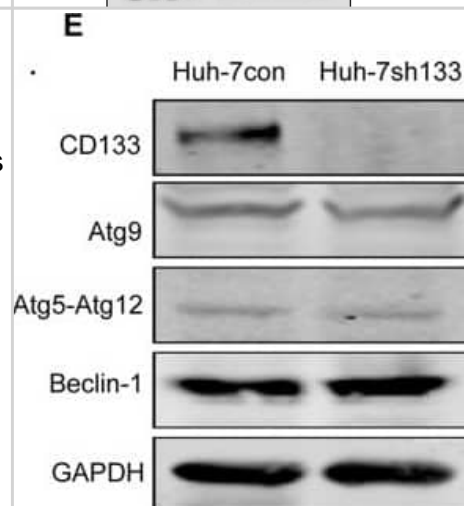
**Flow Cytometry: ATG9A Antibody [NB110-56893]** - An intracellular stain was performed on Hela Cells with NB110-56893 and a matched isotype control. Cells were fixed with 4% PFA and then permeabilized with 0.1% saponin. Cells were incubated in an antibody dilution of 2.5 ug/mL for 30 minutes at room temperature, followed by Rabbit IgG APC-conjugated Secondary Antibody (R&D Systems, F0111).



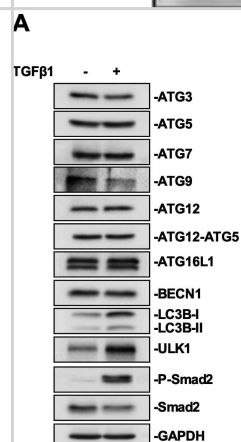
**Western Blot: ATG9A Antibody - BSA Free [NB110-56893]** - The effect of chloroquine, spautin-1 & MG132 on ATG protein levels in A549 cells. (A) A549 cells were treated with 50  $\mu$ M chloroquine, 10  $\mu$ M spautin-1 or 5  $\mu$ M MG132 in the presence or absence of 250 pM TGF $\beta$ 1 for 24 h. Cells were lysed & subjected to SDS-PAGE & immunoblotting anti-ATG3, anti-ATG5, anti-ATG7, anti-ATG9, anti-ATG12, anti-ATG12-ATG5 complex, anti-ATG16L1, anti-BECN1, anti-ULK1, anti-LC3B, anti-P-Smad2, anti-Smad2 & anti-GAPDH (loading control) antibodies. (B) The steady state levels of ATG3, ATG5, ATG7, ATG9, ATG12, ATG12-ATG5, ATG16L1, BECN1, ULK1, & LC3B were quantitated using QuantityOne software & graphed (n=3, mean $\pm$ s.e.m.). Significance is indicated as \* $P$ <0.05, \*\* $P$ <0.01 & \*\*\*\*= $P$ <0.0001. Image collected & cropped by CiteAb from the following publication (<https://pubmed.ncbi.nlm.nih.gov/33168592>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



**Western Blot: ATG9A Antibody - BSA Free [NB110-56893]** - CD133 promoted glucose uptake. A. Levels of glucose uptake in Huh-7con & Huh-7sh133 cells. Mean fluorescence intensity of 2-NBDG uptake was measured by FACS analysis after incubating for 6 h. B. Time course of 2-NBDG uptake in these two cell lines. Statistical significance indicated as \* $p$ <0.05; \*\* $p$ <0.01. C. CD133 or empty vector was transfected respectively into LM3 cells. Glucose uptake was measured at the indicated times upon the medium added with 100  $\mu$ M 2-NBDG. \* $p$ <0.05. D. Detection of relative activities of signaling pathways in Huh-7con & Huh-7sh133 cells by Western blotting. con: Huh-7con cells; sh: Huh-7sh133 cells. E. Detection of autophagic genes in Huh-7con & Huh-7sh133 cells by Western blotting. Image collected & cropped by CiteAb from the following publication (<https://pubmed.ncbi.nlm.nih.gov/23437259>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



**Western Blot: ATG9A Antibody - BSA Free [NB110-56893]** - The effect of TGF $\beta$ 1 on ATG protein levels & LC3B lipidation in A549 cells. (A) A549 cells were treated with 250 pM TGF $\beta$ 1 for 24 h. Cells were lysed & subjected to SDS-PAGE & immunoblotting anti-ATG3, anti-ATG5, anti-ATG7, anti-ATG9, anti-ATG12, anti-ATG12-ATG5 complex, anti-ATG16L1, anti-BECN1, anti-ULK1, anti-LC3B, anti-P-Smad2, anti-Smad2 & anti-GAPDH (loading control) antibodies. (B) The steady state levels of ATG3, ATG5, ATG7, ATG9, ATG12, ATG12-ATG5, ATG16L1, BECN1, ULK1, & LC3B were quantitated using QuantityOne software & graphed (n=3 $\pm$ s.e.m.). Significance is indicated as \* $P$ <0.05, \*\* $P$ <0.01 & \*\*\*\*= $P$ <0.0001. Image collected & cropped by CiteAb from the following publication (<https://pubmed.ncbi.nlm.nih.gov/33168592>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



## Publications

Bi Y, Yang G, Guo Z et al. Chronic high salt intake induces cardiomyocyte autophagic vacuolization during left ventricular maladaptive remodeling in spontaneously hypertensive rats *Experimental and Therapeutic Medicine* 2023-02-16 [PMID: 36911373]

Tarique Bagalkot, Alexander Sorkin Amphetamine Induces Sex-Dependent Loss of the Striatal Dopamine Transporter in Sensitized Mice *eNeuro* 2023-12-19 [PMID: 38164591]

Sisto A, van Wermeskerken T, Pancher M et Al. Autophagy induction by piplartine ameliorates axonal degeneration caused by mutant HSPB1 and HSPB8 in Charcot-Marie-Tooth type 2 neuropathies *Autophagy* 2024-12-27 [PMID: 39698979]

A. Negrete-Hurtado, M. Overhoff, S. Bera, E. De Bruyckere, K. Schätzmüller, M. J. Kye, C. Qin, M. Lammers, V. Kondylis, I. Neundorff, N. L. Kononenko Autophagy lipidation machinery regulates axonal microtubule dynamics but is dispensable for survival of mammalian neurons *Nature Communications* 2020-03-24 [PMID: 32210230]

Sanjar Batirovich Madrakhimov, Jin Young Yang, Jin Ha Kim, Jung Woo Han, Tae Kwann Park mTOR-dependent dysregulation of autophagy contributes to the retinal ganglion cell loss in streptozotocin-induced diabetic retinopathy *Cell Communication and Signaling : CCS* 2021-02-26 [PMID: 33637094]

Nah J, Pyo JO, Jung S et al. BECN1/Beclin 1 is recruited into lipid rafts by prion to activate autophagy in response to amyloid beta 42. *Autophagy* 2013-12-01 [PMID: 24145555]

Haihua Guo, Manuel Rogg, Julia Keller, Ann-Kathrin Scherzinger, Julia Jäckel, Charlotte Meyer, Alena Sammarco, Martin Helmstädter, Oliver Gorke, Olaf Groß, Christoph Schell, Wibke Bechtel-Walz, Ana Cristina Simões E Silva ADP-Ribosylation Factor-Interacting Protein 2 Acts as a Novel Regulator of Mitophagy and Autophagy in Podocytes in Diabetic Nephropathy *Antioxidants* 2024-01-08 [PMID: 38247505]

Jeong S, Kim Y, Park S et al. Lactobacillus plantarum Metabolites Elicit Anticancer Effects by Inhibiting Autophagy-Related Responses *Molecules (Basel, Switzerland)* 2023-02-16 [PMID: 36838877] (WB, Human)

Izumi H, Li Y, Yasunami M et al. Asymmetric Pericentrosomal CD133 Endosomes Induce the Unequal Autophagic Activity During Cytokinesis in CD133-Positive Human Neuroblastoma Cells *Stem cells (Dayton, Ohio)* 2022-03-14 [PMID: 35284915]

Kim Y, Lee Y, Heo G et al. Modulation of Intestinal Epithelial Permeability via Protease-Activated Receptor-2-Induced Autophagy *Cells* 2022-03-03 [PMID: 35269499] (WB, Human)

Wang R, Miao G, Shen JL et al. ESCRT dysfunction compromises endoplasmic reticulum maturation and autophagosome biogenesis in *Drosophila* *Current biology : CB* 2022-02-01 [PMID: 35134326]

Trelford, C B & Di Guglielmo, G M. Assessing methods to quantitatively validate TGF beta -dependent autophagy. *Biol Open* 2020-11-23 [PMID: 33168592] (WB, Mouse)

More publications at <http://www.novusbio.com/NB110-56893>



### **Novus Biologicals USA**

10730 E. Briarwood Avenue  
Centennial, CO 80112  
USA  
Phone: 303.730.1950  
Toll Free: 1.888.506.6887  
Fax: 303.730.1966  
nb-customerservice@bio-techne.com

### **Bio-Techne Canada**

21 Canmotor Ave  
Toronto, ON M8Z 4E6  
Canada  
Phone: 905.827.6400  
Toll Free: 855.668.8722  
Fax: 905.827.6402  
canada.inquires@bio-techne.com

### **Bio-Techne Ltd**

19 Barton Lane  
Abingdon Science Park  
Abingdon, OX14 3NB, United Kingdom  
Phone: (44) (0) 1235 529449  
Free Phone: 0800 37 34 15  
Fax: (44) (0) 1235 533420  
info.EMEA@bio-techne.com

### **General Contact Information**

www.novusbio.com  
Technical Support: nb-technical@bio-techne.com  
Orders: nb-customerservice@bio-techne.com  
General: novus@novusbio.com

### **Products Related to NB110-56893**

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NB110-56893PEP	ATG9A Antibody Blocking Peptide
NBP2-33376H	Blue Marker Antibody (6F4-F6) [HRP]
HAF008	Goat anti-Rabbit IgG Secondary Antibody [HRP]
NB7160	Goat anti-Rabbit IgG (H+L) Secondary Antibody [HRP]
NBP2-24891	Rabbit IgG Isotype Control

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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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