Product Datasheet

alpha Tubulin Antibody (DM1A) - BSA Free
NB100-690

Unit Size: 0.1 ml

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

Reviews: 14  Publications: 115

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# NB100-690
alpha Tubulin Antibody (DM1A) - BSA Free

## Product Information

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<tbody>
<tr>
<td><strong>Unit Size</strong></td>
<td>0.1 ml</td>
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<tr>
<td><strong>Concentration</strong></td>
<td>1.0 mg/ml</td>
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<tr>
<td><strong>Storage</strong></td>
<td>Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.</td>
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<tr>
<td><strong>Clonality</strong></td>
<td>Monoclonal</td>
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<tr>
<td><strong>Clone</strong></td>
<td>DM1A</td>
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<td><strong>Preservative</strong></td>
<td>0.05% Sodium Azide</td>
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<td>IgG1 Kappa</td>
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<td>Protein G purified</td>
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<td><strong>Buffer</strong></td>
<td>PBS</td>
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<tr>
<td><strong>Target Molecular Weight</strong></td>
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## Product Description

**Description**
As the TUBA1A gene is conserved evolutionarily and is ubiquitously expressed in most eukaryotic cell lines, the Alpha tubulin antibody has been shown to be an attractive and effective choice for a loading control, detecting at approximately 50-55 kDa. Quantitative western blotting requires a loading control in order to account and adjust for the differences in the loading of samples across wells.

**Host**
Mouse

**Gene ID**
7846

**Gene Symbol**
TUBA1A

**Species**
Human, Mouse, Rat, Porcine, Avian, Bovine, Canine, Chicken, Chinese Hamster, Drosophila, Fungi, Guinea Pig, Goat, Hamster, Parasite, Monkey, Primate, Rabbit, Xenopus, Yeast

**Reactivity Notes**
Use in Mouse reported in scientific literature (PMID:34871568) Use in Mouse reported in scientific literature (PMID:34533563). Yeast reactivity reported in scientific literature (PMID: 25126732). Goat reactivity reported in scientific literature (PMID:31805146). Will likely react with all mammals.

**Marker**
Microtubule Marker

**Specificity/Sensitivity**
This alpha Tubulin Antibody (DM1A) does not cross-react with beta Tubulin.

**Immunogen**
This alpha Tubulin Antibody (DM1A) was developed against native chicken brain microtubules.

## Product Application Details

**Applications**
Western Blot, Simple Western, Flow Cytometry, Flow (Intracellular), Immunocytochemistry/Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Frozen, Immunohistochemistry-Paraffin, Immunomicroscopy, Immunoprecipitation, CyTOF-ready

**Recommended Dilutions**
Western Blot 1:5000, Simple Western 1:50, Flow Cytometry 1 ug per million cells, Immunohistochemistry 1:100-1:500, Immunocytochemistry/Immunofluorescence 1:50000-1:100000, Immunoprecipitation 1:50-1:100, Immunohistochemistry-Paraffin 1:100-1:500, Immunohistochemistry-Frozen 1:100-1:500, Immunomicroscopy, Flow (Intracellular), CyTOF-ready
This alpha Tubulin Antibody (DM1A) is useful as a loading control for Western blot as well as Immunoprecipitation, Immunohistochemistry on paraffin-embedded and frozen sections, Immunocytochemistry/Immunofluorescence and Flow Cytometry.

The DM1A alpha tubulin antibody is ideal for use as a Western blot loading control, where a band can be seen around 50-55 kDa and as a cytoskeletal marker in ICC. For IHC-Paraffin, antigen retrieval is not essential, but may optimize staining.

Simple Western reported by an internal validation. Separated by Size-Jess/Wes, Sally Sue/Peggy Sue; matrix was 12-230 kDa. Only 10 - 15 ul of the recommended dilution is used per data point.

This antibody is CyTOF ready.

Images

Simple Western: alpha Tubulin Antibody (DM1A) [NB100-690] - Simple Western lane view shows a specific band for alpha Tubulin in 1.0 mg/ml of HeLa lysate. This experiment was performed under reducing conditions using the 12-230 kDa separation system. Alpha tubulin molecular weight: 50 kDa.

Immunohistochemistry: alpha Tubulin Antibody (DM1A) [NB100-690] - Analysis of formalin fixed colon sections. Heat mediated antigen retrieval was performed using sodium citrate buffer for 20 min before incubating with primary antibody at a 0.5ug/ml dilution for 15 min at RT.

Immunohistochemistry: alpha Tubulin Antibody (DM1A) [NB100-690] - Analysis of colon tissue. Sections were formalin fixed and embedded with paraffin. Sodium citrate heat mediated antigen retrieval for 20 min. Incubated with primary antibody for 15 min at a 5 ug/ml concentration. Corner image is staining with secondary only.
Immunohistochemistry: alpha Tubulin Antibody (DM1A) [NB100-690] - Analysis of formalin fixed paraffin embedded heart sections. Used at a dilution of 1:500.

Western Blot: alpha Tubulin Antibody (DM1A) [NB100-690] - Analysis of alpha tubulin in 9 cell lysates. Lane 1. HeLa; Lane 2. JURKAT; Lane 3. COS7; Lane 4. NIH-3T3; Lane 5. PC-12; Lane 6. RAT2; Lane 7. CHO; Lane 8. MDBK; Lane 9. MDCK

Flow Cytometry: alpha Tubulin Antibody (DM1A) [NB100-690] - Intracellular flow cytometric staining of 1 x 10^6 CHO (A) and HEK-293 (B) cells using alpha Tubulin antibody (dark blue). Isotype control shown in orange. An antibody concentration of 1 ug/1x10^6 cells was used.

Immunomicroscopy: alpha Tubulin Antibody (DM1A) [NB100-690] - Analysis of HeLa cells, green staining is alpha tubulin whereas red is DNA stained with propidium iodide.
Western Blot: alpha Tubulin Antibody (DM1A) [NB100-690] - GS treatment increases markers of beiging in 3T3-L1 adipocytes. GS treatment upregulates markers of beiging, including beta-3AR (C) proteins. Data presented as mean +/- SEM from n = 4 replicates per group. * p < 0.05, *** p < 0.001 vs. control. Abbreviations: beta-3 adrenergic receptor (beta-3AR). Image collected and cropped by CiteAb from the following publication (http://www.mdpi.com/2305-6320/6/1/22), licensed under a CC-BY license.

Immunocytochemistry/Immunofluorescence: alpha Tubulin Antibody (DM1A) - BSA Free [NB100-690] - Mouse MS1 cells were fixed in 4% paraformaldehyde for 10 minutes and permeabilized in 0.05% Triton X-100 in PBS for 5 minutes. The cells were incubated with alpha Tubulin Antibody [DM1A] conjugated to Alexa Fluor 647 (NB100-690AF647) at 2 ug/ml for 1 hour at room temperature. Nuclei were counterstained with DAPI (Blue). Cells were imaged using a 100X objective and digitally deconvolved.

Immunohistochemistry-Paraffin: alpha Tubulin Antibody (DM1A) [NB100-690] - IHC analysis of a formalin fixed and paraffin embedded tissue section of mouse prostate using alpha Tubulin Antibody (DM1A) at 1:200 dilution. The signal was developed using HRP labelled secondary and DAB reagent which followed counterstaining with hematoxylin. The antibody generated a specific cytoplasmic/cytoskeletal staining in the prostate epithelial cells.

Flow Cytometry: alpha Tubulin Antibody (DM1A) [NB100-690] - An intracellular stain was performed on HeLa cells with alpha Tubulin [DM1A] Antibody NB100-690AF700 (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 700.
Western Blot: alpha Tubulin Antibody (DM1A) [NB100-690] - Western blot analysis of extracts from HeLa, COS and C6 cells using alpha Tubulin antibody (NB100-690, 1:1000, Alpha tubulin molecular weight: 50 kDa)

Western Blot: alpha Tubulin Antibody (DM1A) [NB100-690] - Analysis of alpha tubulin (molecular weight of 50 kDa) in 9 cell lysates. Lane 1. HeLa; Lane 2. JURKAT; Lane 3. COS7; Lane 4. NIH-3T3; Lane 5. PC-12; Lane 6. RAT2; Lane 7. CHO; Lane 8. MDBK; Lane 9. MDCK

Western Blot: alpha Tubulin Antibody (DM1A) [NB100-690] - Analysis of HeLa and COS-7 lysates. Alpha tubulin molecular weight: 50 kDa.

Immunocytochemistry/Immunofluorescence: alpha Tubulin Antibody (DM1A) [NB100-690] - IF Confocal analysis of C6 cells using alpha Tubulin antibody (NB100-690, 1:50). An Alexa Fluor 488-conjugated Goat to mouse IgG was used as secondary antibody (green, A). Actin filaments were labeled with Alexa Fluor 568 phalloidin (red, B). DAPI was used to stain the cell nuclei (blue, C).
Immunocytochemistry/Immunofluorescence: alpha Tubulin Antibody (DM1A) [NB100-690] - HeLa cells were fixed for 10 minutes using 10% formalin and then permeabilized for 5 minutes using 1X TBS + 0.5% Triton-X100. The cells were incubated with anti-alpha Tubulin (DM1A) (NB100-690) at a 1:200 dilution overnight at 4C and detected with an anti-mouse Dylight 488 (Green) at a 1:500 dilution. Nuclei were counterstained with DAPI (Blue). Cells were imaged using a 40X objective.

Immunocytochemistry/Immunofluorescence: alpha Tubulin Antibody (DM1A) [NB100-690] - Staining of skin fibroblasts.

Immunocytochemistry/Immunofluorescence: alpha Tubulin Antibody (DM1A) [NB100-690] - Analysis of embryonic fibroblasts in the anaphase portion of mitosis.

Immunocytochemistry/Immunofluorescence: alpha Tubulin Antibody (DM1A) [NB100-690] - U-251 MG cells were fixed in 4% paraformaldehyde for 10 minutes and permeabilized in 0.05% Triton X-100 in PBS for 5 minutes. The cells were incubated with anti-alpha Tubulin Antibody [DM1A] conjugated to Alexa Fluor 488 (NB100-690AF488) at 5 ug/ml for 1 hour at room temperature. Nuclei were counterstained with DAPI (Blue). Cells were imaged using a 100X objective and digitally deconvolved.
Immunocytochemistry/Immunofluorescence: alpha Tubulin Antibody (DM1A) [NB100-690] - A431 cells were fixed in 4% paraformaldehyde for 10 minutes and permeabilized in 0.05% Triton X-100 in PBS for 5 minutes. The cells were incubated with anti-alpha Tubulin Antibody [DM1A] conjugated to Alexa Fluor 488 (NB100-690AF488) at 5 ug/ml for 1 hour at room temperature. Nuclei were counterstained with DAPI (Blue). Cells were imaged using a 100X objective and digitally deconvolved.

Immunocytochemistry/Immunofluorescence: alpha Tubulin Antibody (DM1A) [NB100-690] - NIH3T3 cells were fixed in 4% paraformaldehyde for 10 minutes and permeabilized in 0.05% Triton X-100 in PBS for 5 minutes. The cells were incubated with anti-alpha Tubulin Antibody [DM1A] conjugated to Alexa Fluor 488 (NB100-690AF488) at 5 ug/ml for 1 hour at room temperature. Nuclei were counterstained with DAPI (Blue). Cells were imaged using a 100X objective and digitally deconvolved.

Immunocytochemistry/Immunofluorescence: alpha Tubulin Antibody (DM1A) [NB100-690] - HeLa cells were fixed in 4% paraformaldehyde for 10 minutes and permeabilized in 0.05% Triton X-100 in PBS for 5 minutes. The cells were incubated with alpha Tubulin Antibody [DM1A] conjugated to Janelia Fluor 549 (NB100-690JF549) at 5 ug/ml for 1 hour at room temperature. Nuclei were counterstained with DAPI (Blue). Cells were imaged using a 100X objective and digitally deconvolved.

Immunocytochemistry/Immunofluorescence: alpha Tubulin Antibody (DM1A) [NB100-690] - HeLa cells were fixed in 4% paraformaldehyde for 10 minutes and permeabilized in 0.05% Triton X-100 in PBS for 5 minutes. The cells were incubated with alpha Tubulin Antibody [DM1A] conjugated to Janelia Fluor 549 (NB100-690JF549) at 5 ug/ml for 1 hour at room temperature. Nuclei were counterstained with DAPI (Blue). Cells were imaged using a 100X objective and digitally deconvolved.
Immunohistochemistry: alpha Tubulin Antibody (DM1A) [NB100-690] - Analysis of paraffin embedded colon sections.

Immunohistochemistry: alpha Tubulin Antibody (DM1A) [NB100-690] - Analysis of small intestine tissue fixed with formalin and paraffin embedded showing cytoplasmic and cytoskeletal staining of glandular cells.

Immunohistochemistry-Paraffin: alpha Tubulin Antibody (DM1A) [NB100-690] - IHC analysis of a formalin fixed paraffin embedded tissue section of mouse skeletal muscle using alpha Tubulin Antibody (DM1A) at 1:100 dilution with HRP-DAB detection and hematoxylin counterstaining. The antibody generated a strong cytoplasmic signal in the muscle cells with cytoplasmic-nuclear signal in the endothelial cells.

Immunohistochemistry-Paraffin: alpha Tubulin Antibody (DM1A) [NB100-690] - IHC analysis of a formalin fixed paraffin embedded tissue section of mouse lung using alpha Tubulin Antibody (DM1A) at 1:100 dilution with HRP-DAB detection and hematoxylin counterstaining. The antibody generated chunks of cytoplasmic signal in the alveolar and bronchiolar epithelial cells.
Immunohistochemistry-Paraffin: alpha Tubulin Antibody (DM1A) [NB100-690] - IHC analysis of a formalin fixed paraffin embedded tissue section of mouse heart using alpha Tubulin Antibody (DM1A) at 1:100 dilution with HRP-DAB detection and hematoxylin counterstaining. The antibody generated a strong and specific cytoplasmic signal in the muscle cells.

Flow Cytometry: alpha Tubulin Antibody (DM1A) [NB100-690] - Analysis of PE conjugate of NB100-690. An intracellular stain was performed on RAW 246.7 cells with Alpha Tubulin antibody (DM1A) NB100-690PE (blue) and a matched isotype control NBP2-27287PE (orange). Cells were fixed with 4% PFA and then permeabilized wi

Flow Cytometry: alpha Tubulin Antibody (DM1A) [NB100-690] - Analysis of PE conjugate of NB100-690. An intracellular stain was performed on SH-SY5Y cells with Alpha Tubulin antibody (DM1A) NB100-690PE (blue) and a matched isotype control NBP2-27287PE (orange). Cells were fixed with 4% PFA and then permeabilized with

Flow (Intracellular): alpha Tubulin Antibody (DM1A) [NB100-690] - An intracellular stain was performed on HeLa cells with alpha Tubulin Antibody (DM1A) NB100-690AF488 (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 488. Image from the Alexa Fluor 488 version of this antibody.
Flow Cytometry: alpha Tubulin Antibody (DM1A) [NB100-690] - An intracellular stain was performed on HeLa cells with alpha Tubulin (DM1A) Antibody NB100-690G (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 DyLight 488.

Flow Cytometry: alpha Tubulin Antibody (DM1A) [NB100-690] - An intracellular stain was performed on HeLa cells with alpha Tubulin [DM1A] Antibody NB100-690AF647 (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 Alexa Fluor 647.

Flow Cytometry: alpha Tubulin Antibody (DM1A) [NB100-690] - An intracellular stain was performed on HeLa cells with alpha Tubulin (DM1A) Antibody NB100-690JF646 (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 Janelia Fluor 646.

Immunomicroscopy: alpha Tubulin Antibody (DM1A) [NB100-690] - Staining of the marine parasite Cryptocaryon irritans mouth. Large bundles of microtubules form a cytophyrigeal basket.
<table>
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<tr>
<th>Publications</th>
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<tr>
<td>Chen T, Meng Y, Zhou Z et al. GAS5 protects against nonalcoholic fatty liver disease via miR-28a-5p/MARCH7/NLRP3 axis-mediated pyroptosis Cell death and differentiation 2023-07-01 [PMID: 37337032]</td>
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<td>Details: WB 1:1000</td>
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<td>Conde MA, Alza NP, Funk MI et al. alpha-Synuclein Attenuates Maneb Neurotoxicity through the Modulation of Redox-Sensitive Transcription Factors Oxidative medicine and cellular longevity 2023-04-18 [PMID: 37113744]</td>
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<tr>
<td>Suzuki S, Fleig A, Penner R CBGA ameliorates inflammation and fibrosis in nephropathy Scientific reports 2023-04-18 [PMID: 37072467] (WB, Mouse)</td>
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<td>Paulukinas RD, Penning TM Insulin-Induced AKR1C3 Induces Fatty Acid Synthase in a Model of Human PCOS Adipocytes Endocrinology 2023-02-17 [PMID: 36799021] (WB)</td>
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<td>Details: Citation using the HRP version of this antibody.</td>
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<tr>
<td>Cooney AL, Thurman AL, McCray PB Jr Et al. Lentiviral vectors transduce lung stem cells without disrupting plasticity Mol Ther Nucleic Acids 2021-08-30 [PMID: 34458011]</td>
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<tr>
<td>Details: Citation using the Alexa Fluor 405 version of this antibody.</td>
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<tr>
<td>Chow S, Hsu C, Yang C, Meir Y A non-transcriptional function of YAP physically interacts with α-tubulin to stabilize the mitotic spindle and midbody structures through gaining the acetyl-α-tubulin in lung cancer cell Research Square 2022-10-06 (WB, Human)</td>
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<tr>
<td>Volkova EI, Dorogova NV, Andreyenkov OV et al. New Mutations in the 5' Region of the Notch Gene Affect Drosophila melanogaster Oogenesis Journal of developmental biology 2022-08-09 [PMID: 35997396] (WB, Drosophila)</td>
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<td>Details: Dilution used for WB 1:5000</td>
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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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