

Product Datasheet

GAPDH Antibody - BSA Free

NB100-56875

Unit Size: 0.1 mg

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

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GAPDH Antibody - BSA Free

Product Information	
Unit Size	0.1 mg
Concentration	1.0 mg/ml
Storage	Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.
Clonality	Polyclonal
Preservative	0.05% Sodium Azide
Isotype	IgG
Purity	Protein G purified
Buffer	PBS
Target Molecular Weight	36 kDa

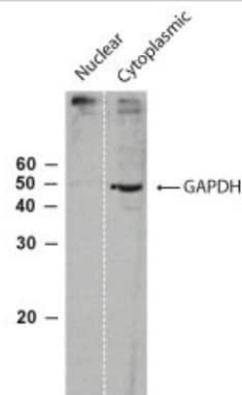
Product Description	
Description	Novus Biologicals Rabbit GAPDH Antibody - BSA Free (NB100-56875) is a polyclonal antibody validated for use in IHC, WB, ICC/IF and Simple Western. Anti-GAPDH Antibody: Cited in 124 publications. All Novus Biologicals antibodies are covered by our 100% guarantee.
Host	Rabbit
Gene ID	2597
Gene Symbol	GAPDH
Species	Human, Mouse, Rat, Porcine, Canine, Drosophila, Feline, Hamster, Primate
Reactivity Notes	Porcine reactivity reported in scientific literature (PMID:32764569). Immunogen displays the following percentage of sequence identity for non-tested species: 100% homologous in baboon, chimp and macaque; salamander(86%). .
Marker	Cytosolic Marker
Immunogen	Amino acids 73-87 PITIFQERDPSKIKW of glyceraldehyde 3-phosphate dehydrogenase protein were used as the immunogen of this GAPDH antibody.

Product Application Details	
Applications	Western Blot, Simple Western, Immunoblotting, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry
Recommended Dilutions	Western Blot 1:500-1:2000, Simple Western 1:500, Immunohistochemistry, Immunocytochemistry/ Immunofluorescence, Immunoblotting
Application Notes	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 HeLa lysate 0.5 mg/mL, separated by Size, antibody dilution of 1:500, apparent MW was 43 kDa. Use in immunoblotting reported in scientific literature (PMID: 28545464). Use in ICC/IF was reported in scientific literature (PMID: 31312260). Use in Immunohistochemistry reported in scientific literature (PMID:32123074).

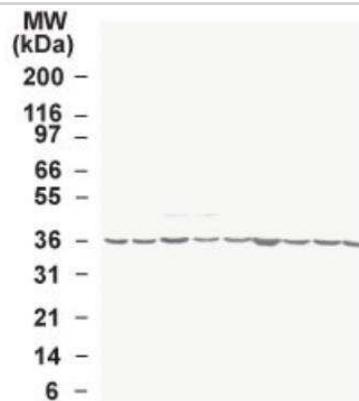


Images

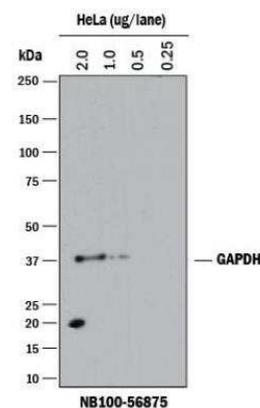
Western Blot: GAPDH Antibody [NB100-56875] - Analysis of GAPDH using this antibody at 1:500 in nuclear and cytoplasmic fractions made from *Drosophila* head extracts. Data courtesy of Dr. Jerry Lin, University of Wisconsin-Madison.



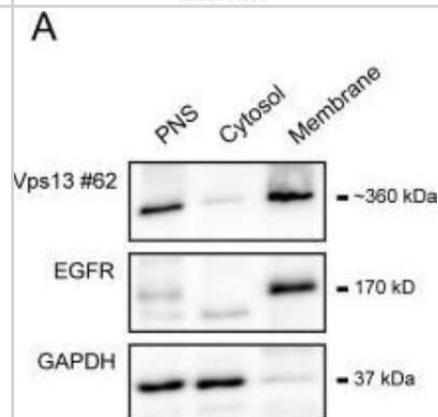
Western Blot: GAPDH Antibody [NB100-56875] - Analysis of GAPDH in the multiple human tumor cell line lysate INSTA-Blot using this antibody. 25 ug/ml. Theoretical molecular weight: 36 kDa.



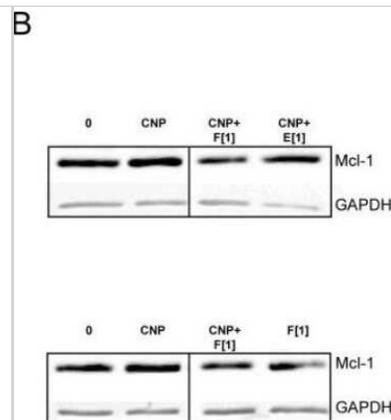
Western Blot: GAPDH Antibody [NB100-56875] - Analysis using HeLa cells. Theoretical molecular weight: 36 kDa.



Western Blot: GAPDH Antibody [NB100-56875] - Vps13 co-fractionates with Rab7 and Rab5. Western blot analysis of control fly head samples fractionated into a cytosolic and membrane fraction from postnuclear supernatant (PNS). EGFR was used as a membrane marker and GAPDH as a cytosolic marker. Image collected and cropped by CiteAb from the following publication (<https://dx.plos.org/10.1371/journal.pone.0170106>), licensed under a CC-BY license.



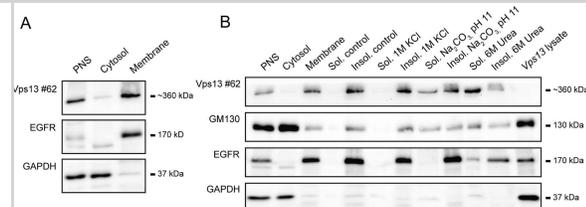
Western Blot: GAPDH Antibody [NB100-56875] - Particle-induced Changes in Apoptosis are Restored by Firoin. Peripheral blood neutrophils from healthy donors (n57), 2 h pre-treated with indicated amounts of firoin (F) or 1 mM ectoine (E) before CNP exposition (33 mg/ml). : 6 h post CNP-treatment the anti-apoptotic Mcl-1 expression was measured by Western blot analysis. GAPDH was used as a loading control. Two representative blots from different individuals are shown and irrelevant lanes were removed. Image collected and cropped by CiteAb from the following publication (<https://dx.plos.org/10.1371/journal.pone.0111485>), licensed under a CC-BY license.



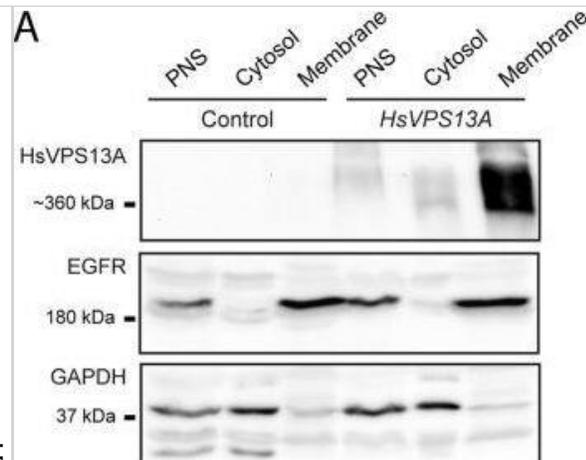
Simple Western: GAPDH Antibody [NB100-56875] - Lane view shows a specific band for GAPDH in 0.5 mg/ml of HeLa lysate. This experiment was performed under reducing A246conditions using the 12-230 kDa separation system. Note: band observed higher than predicted 36 kDa molecular weight.



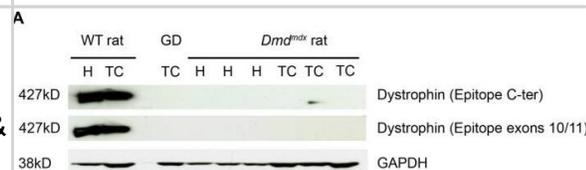
Western Blot: GAPDH Antibody [NB100-56875] - Vps13 co-fractionates with Rab7 & Rab5. (A) Western blot analysis of control fly head samples fractionated into a cytosolic & membrane fraction from postnuclear supernatant (PNS). EGFR was used as a membrane marker & GAPDH as a cytosolic marker. (B) Membrane fractions from control fly heads treated with 1 M KCl, Na₂CO₃ pH 11 or 6 M urea were centrifuged to separate the soluble & insoluble (membrane containing) fractions. The level of Vps13 was determined in these fractions. Markers for peripheral membrane proteins (GM130), integral membrane proteins (EGFR) & the cytosolic proteins (GAPDH) were used. The "Vps13 lysate" lane contains a lysate derived from Vps13 homozygous mutant fly heads, as expected no Vps13 is detected, demonstrating the specificity of the antibody against Vps13. (C) Membranes from control fly heads were fractionated on a sucrose gradient. Western blot analysis was performed to analyze the distribution of Vps13 in relation to markers associated with membranes of various organelles: Rab7 (late endosomes), Rab5 (early endosomes), GM130 (golgi), Lamp1 (lysosomes) & ATP5A (mitochondria). (D) Immunoprecipitation of membranes from fraction 14 of the sucrose gradient using Vps13 NT, Rab7 & Rab5 antibodies. (E) Quantification of the sucrose gradient fractionation of Fig 2C. Image collected & cropped by CiteAb from the following publication (<https://pubmed.ncbi.nlm.nih.gov/28107480>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



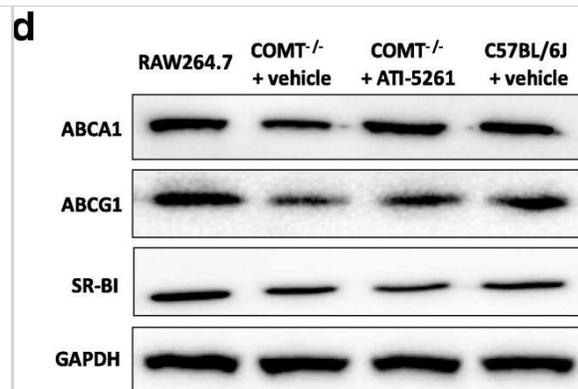
Western Blot: GAPDH Antibody [NB100-56875] - Overexpression of HsVps13A rescues phenotypes of Vps13 mutants. (A) Samples from fly heads of Actin-GAL4 / + (as a control) & Actin-GAL4 / UAS-HsVps13A (HsVps13A expressing) flies were separated into a membrane & cytosol fraction & analyzed by Western blot for HsVps13A levels. EGFR & GAPDH used as controls for membrane & cytosolic proteins, respectively. (B) Eclosion rate of Vps13 mutant flies a Actin-GAL4/+ (control) or Actin-GAL4/UAS-HsVp13A (HsVps13A expressing) background at 25°C. (C) Ubiquitylated proteins from samples of 1 day old fly head extracts of Vps13/CyO; Actin-GAL4/+ (as a control), Vps13/ Vps13; Actin-GAL4/+ (representing homozygous mutants) & Vps13/ Vps13; Actin-GAL4/UAS-HsVps13A (representing homozygous mutants expressing human VPS13A). (D) Representative picture of ubiquitylated protein staining of the third instar larval ventral nerve cord of Vps13/CyO; Actin-GAL4/+ (as a control), Vps13/ Vps13; Actin-GAL4/+ & Vps13/ Vps13; Actin-GAL4/UAS-HsVps13A. Arrows indicate accumulations of ubiquitylated positive structures. The scale bar indicates 50 μ m & 12,5 μ m in the enlargement. (E) Quantification of the number of puncta in third instar larval ventral nerve cord of the experiment presented in Fig 6D. (F) Life span curve of Vps13/ Vps13; Actin-GAL4/+ & Vps13/ Vps13; Actin-GAL4/UAS-HsVps13A. All quantifications show the mean & SEM of at least three independent experiments per condition. For statistical analysis a two-tailed students T-test was used in combination with a Welch's correction if necessary. P<0.05 is *, P<0.01 is ** & P<0.001 is ***. Image collected & cropped by CiteAb from the following publication (<https://pubmed.ncbi.nlm.nih.gov/28107480>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



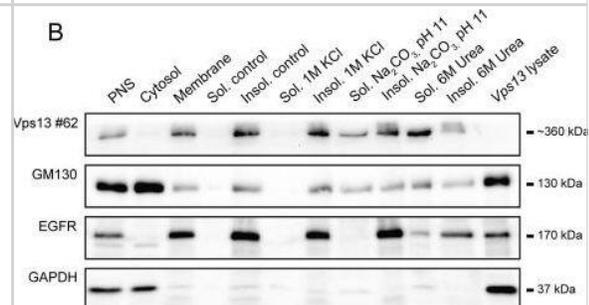
Western Blot: GAPDH Antibody [NB100-56875] - No dystrophin expression was detected in cardiac & skeletal muscles of Dmdmdx rats. (A) Male 7 month-old rats of line 61, wild-type littermate controls (WT) & Dmdmdx were sacrificed & biopsies from tibialis cranialis muscles (TC) & hearts (H) were harvested. Western-blot of total proteins (50 μ g) was incubated with NCL-DYS2 & Manex1011C monoclonal antibodies (C-terminal & exons 10/11 epitopes, respectively). This revealed undetectable levels of the 427 kDa dystrophin band in line 61 Dmdmdx rats. Muscle from a GRMD dog (GD) was used as negative control & samples from WT rats were used as positive controls. Staining with an anti-GAPDH polyclonal antibody validated equal protein loadings. (B–E) Heart & biceps femoris muscles from the same wild-type (B & C) & Dmdmdx rats (D & E) were assessed for dystrophin expression using immunohistochemistry with Mandys110 monoclonal antibody (against exons 38–39 epitope). Compared to the subsarcolemmal expression of dystrophin in wild-type muscles, no dystrophin was detected in Dmdmdx rats except for the presence in skeletal muscle of only rare scattered revertant positive fibers (arrowheads). Immunolabelling of dystrophin (B–E) Bar= 100 μ m. Image collected & cropped by CiteAb from the following publication (<https://dx.plos.org/10.1371/journal.pone.0110371>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



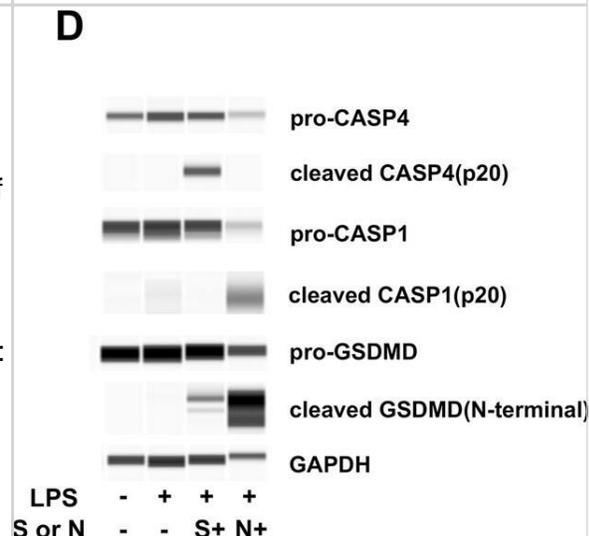
Western Blot: GAPDH Antibody [NB100-56875] - ABCA1, ABCG1 & SR-BI protein expressions. a & b Hepatic protein expressions of ABCA1, ABCG1 & SR-BI were significantly decreased in COMT^{-/-} mice at GD 18.5, compared to C57BL/6 J mice. Decreased hepatic ABCA1 expression was also observed at 10 days postpartum. ATI-5261 increased ABCA1 & ABCG1 expression in the liver at 10 days postpartum. c Placental protein expressions of ABCA1 & ABCG1 was reduced in COMT^{-/-} mice, compared to C57BL/6 J mice. ATI-5261 treatment significantly increased ABCA1 levels in the placenta of COMT^{-/-} mice. d Representative immunoblots of the corresponding proteins in the placenta with mouse RAW264.7 cell lysate included as positive control. Similar results were obtained when the experiment was repeated with lysates prepared from three batches of tissues. Data are presented as mean \pm SEM. Groups (n = 8 in all groups) were compared using one-way ANOVA with post-hoc analysis (Tukey's procedure). *, p < 0.05 Image collected & cropped by CiteAb from the following publication (<https://pubmed.ncbi.nlm.nih.gov/30237900>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Western Blot: GAPDH Antibody [NB100-56875] - Vps13 co-fractionates with Rab7 & Rab5. (A) Western blot analysis of control fly head samples fractionated into a cytosolic & membrane fraction from postnuclear supernatant (PNS). EGFR was used as a membrane marker & GAPDH as a cytosolic marker. (B) Membrane fractions from control fly heads treated with 1 M KCl, Na₂CO₃ pH 11 or 6 M urea were centrifuged to separate the soluble & insoluble (membrane containing) fractions. The level of Vps13 was determined in these fractions. Markers for peripheral membrane proteins (GM130), integral membrane proteins (EGFR) & the cytosolic proteins (GAPDH) were used. The "Vps13 lysate" lane contains a lysate derived from Vps13 homozygous mutant fly heads, as expected no Vps13 is detected, demonstrating the specificity of the antibody against Vps13. (C) Membranes from control fly heads were fractionated on a sucrose gradient. Western blot analysis was performed to analyze the distribution of Vps13 in relation to markers associated with membranes of various organelles: Rab7 (late endosomes), Rab5 (early endosomes), GM130 (golgi), Lamp1 (lysosomes) & ATP5A (mitochondria). (D) Immunoprecipitation of membranes from fraction 14 of the sucrose gradient using Vps13 NT, Rab7 & Rab5 antibodies. (E) Quantification of the sucrose gradient fractionation of Fig 2C. Image collected & cropped by CiteAb from the following publication (<https://pubmed.ncbi.nlm.nih.gov/28107480>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Simple Western: GAPDH Antibody [NB100-56875] - Analysis of non-canonical inflammasome pathway. A LDH cytotoxicity assay in the presence of LPS or SCGB3A2 alone, or the two together (SCGB3A2 + LPS). B LDH cytotoxicity assay in the presence of various amount of nigericin. Average \pm SD from more than three independent experiments. *P < 0.01, **P < 0.0001 by Tukey's multiple comparison. C Morphology of cells cultured in the presence of LPS or SCGB3A2 alone, SCGB3A2 + LPS, or nigericin for 3 h. For nigericin-treated group, cells were primed with LPS before addition of nigericin. Black arrow indicates ballooned cells, characteristic feature of pyroptosis. D Western blotting for the cleaved forms of CASP1 (p20), CASP4 (p20), & GSDMD (N-terminal). S: SCGB3A2, N: nigericin. Experiments were repeated more than twice & same results were obtained. Image collected & cropped by CiteAb from the following publication (<https://pubmed.ncbi.nlm.nih.gov/33452234>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Publications

Cheng L, Zhu X, Liu Y et al. ACSL4 contributes to sevoflurane-induced ferroptotic neuronal death in SH-SY5Y cells via the 5' AMP-activated protein kinase/mammalian target of rapamycin pathway *Annals of Translational Medicine* 2021-09-01 [PMID: 34734006] (Western Blot, Human)

Sung SE, Seo MS, Kang KK et al. Isolation and Characterization of Extracellular Vesicle from Mesenchymal Stem Cells of the Epidural Fat of the Spine *Asian Spine Journal* 2022-04-30 [PMID: 34461688] (Western Blot, Human)

Belvin BR, Lewis JP. Ferroportin depletes iron needed for cell cycle progression in head and neck squamous cell carcinoma *Frontiers in Oncology* 2023-01-09 [PMID: 36698390] (Western Blot, Human)

Druzak SA, Tardelli M, Mays SG et al. Ligand dependent interaction between PC-TP and PPAR γ mitigates diet-induced hepatic steatosis in male mice *Nature Communications* 2023-05-12 [PMID: 37173315] (Western Blot, Human)

Krisko TI, Nicholls HT, Bare CJ et al. Dissociation of Adaptive Thermogenesis from Glucose Homeostasis in Microbiome-Deficient Mice *Cell Metab.* 2020-02-12 [PMID: 32084379] (Western Blot, Human)

Changsheng Zhang, Shengyang Du, Lei Cao Retracted Article: Long non-coding RNA KCNQ1OT1 promotes osteosarcoma progression by increasing β -catenin activity *RSC Advances* 2018-11-08 [PMID: 35558611] (Western Blot, Human)

Jacome Burbano MS, Robin JD, Bauwens S et al. Non-canonical telomere protection role of FOXO3a of human skeletal muscle cells regulated by the TRF2-redox axis *Communications biology* 2023-05-25 [PMID: 37231173] (Western Blot, Human)

Details:

Dilution:1:200

Miktosz A, tukaszuk B, Baranowski M et al. Nerve regeneration in rat peripheral nerve allografts: Evaluation of cold-inducible RNA-binding protein in nerve storage and regeneration *J. Comp. Neurol.* 2019-05-22 [PMID: 31116410]

Sultanakhmetov G, Limlingan SJM, Fukuchi A, Tsuda K et Al. Mark4 ablation attenuates pathological phenotypes in a mouse model of tauopathy *Brain Commun* 2024-05-07 [PMID: 38712317]

Homma D, Limlingan SJM, Saito T et Al. SARS-CoV-2-derived protein Orf9b enhances MARK2 activity via interaction with the autoinhibitory KA1 domain *FEBS Lett* 2024-07-05 [PMID: 38969617]

Wang TC, Abolghasemzade S, McKee BP et Al. Matrix stiffness drives drop like nuclear deformation and lamin A/C tension-dependent YAP nuclear localization *Nat Commun* 2024-11-23 [PMID: 39578439]

Ryu JE, Shim KW, Roh HW et Al. Circadian regulation of endoplasmic reticulum calcium response in cultured mouse astrocytes *Elife* 2024-11-27 [PMID: 39601391]

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NB7160	Goat anti-Rabbit IgG (H+L) Secondary Antibody [HRP]
NBP2-24891	Rabbit IgG Isotype Control

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