Product Datasheet

beta-Actin Antibody
NB600-532

Unit Size: 0.1 mg

Store at 4C. Do not freeze.

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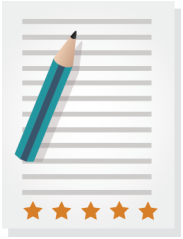
Updated 12/20/2023 v.20.1



NB600-532

beta-Actin Antibody

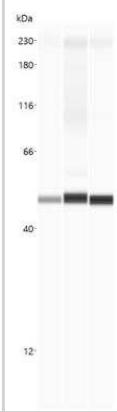
Product Information	
Unit Size	0.1 mg
Concentration	1 mg/ml
Storage	Store at 4C. Do not freeze.
Clonality	Polyclonal
Preservative	0.09% Sodium Azide
Isotype	IgG
Purity	Immunogen affinity purified
Buffer	Tris-Citrate/Phosphate (pH 7.0 - 8.0)
Target Molecular Weight	42 kDa

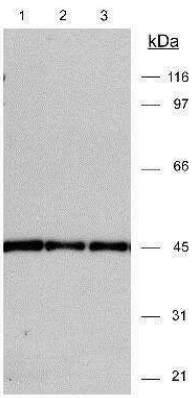
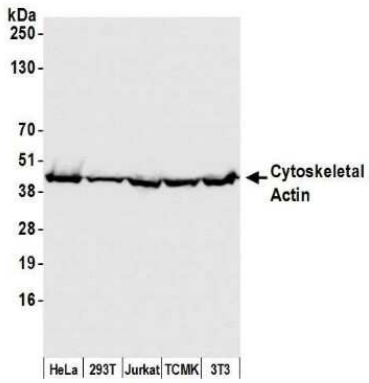
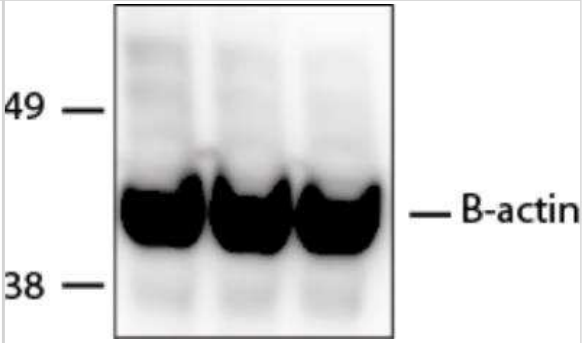
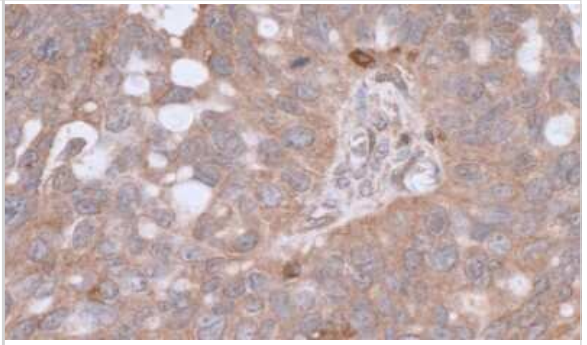
Product Description	
Host	Rabbit
Gene ID	60
Gene Symbol	ACTB
Species	Human, Mouse
Reactivity Notes	Based on 100% sequence identity, this antibody is predicted to react with Rat, X. tropicalis, Chicken, Sheep, Bovine, Dog, Horse, Rabbit, Guinea pig, Pig, Golden hamster, Orangutan, and Chimpanzee.
Immunogen	This beta-Actin Antibody maps to a region corresponding to the N-terminus of human Beta Actin. [UniProt# P60709]

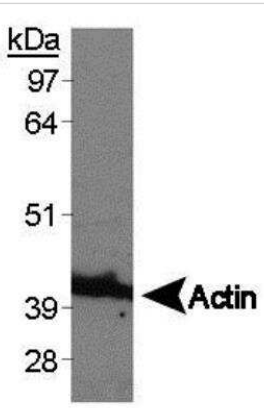
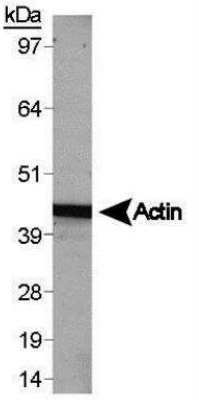
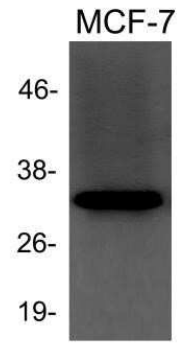
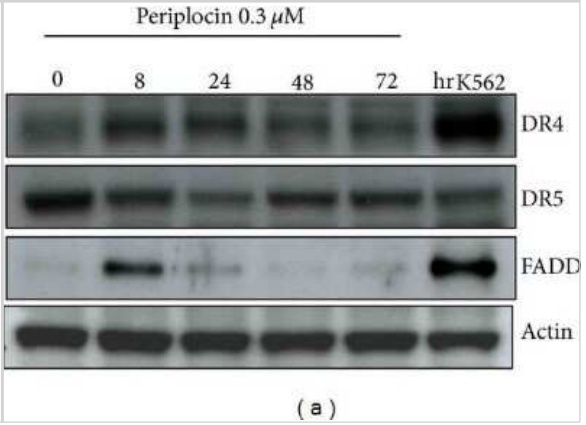
Product Application Details	
Applications	Western Blot, Simple Western, Immunohistochemistry, ICC/IF (Negative), Immunoprecipitation (Negative)
Recommended Dilutions	Western Blot 1:2000-1:10000, Simple Western 1:2000, Immunohistochemistry 1:2000-1:10000, Immunoprecipitation (Negative), ICC/IF (Negative)
Application Notes	This antibody is useful for Western Blot. A 40 kDa band is detected in HeLa whole cell lysate and mouse NIH3T3 cells. For IHC, epitope retrieval with citrate buffer pH6.0 is recommended for FFPE tissue sections. In Simple Western only 10 - 15 uL of the recommended dilution is used per data point. Separated by Size-Wes, Sally Sue/Peggy Sue.

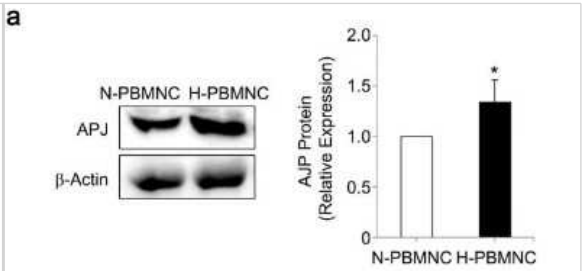
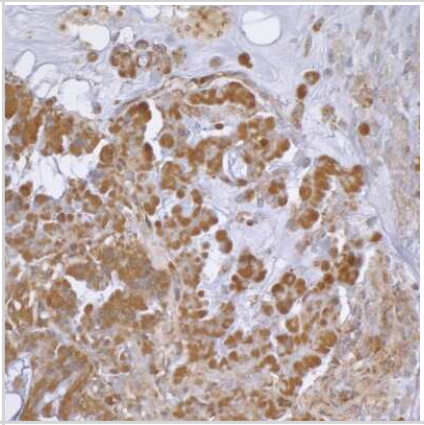
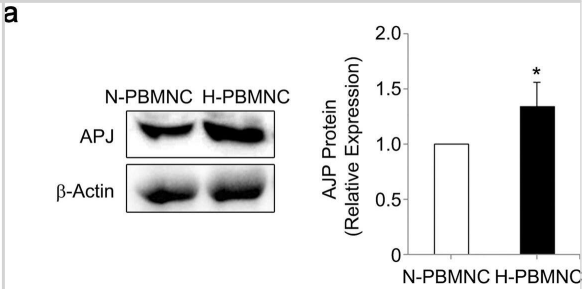
Images

Simple Western: beta-Actin Antibody [NB600-532] - Simple Western lane view shows a specific band for Beta Actin using NB600-532 at 1:200 in A431, C2C12 and C6 cell lysates. This experiment was performed under reducing conditions using the 12-230 kDa separation system.

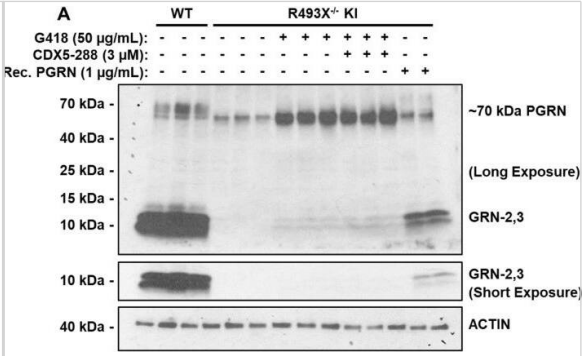


Western Blot: beta-Actin Antibody [NB600-532] - Detection of actin in 3T3 lysates (20ug). ECL detection 30 seconds. A specific band is seen using different dilutions: Lane 1 (1:15,000), Lane 2 (1:10,000), and Lane 3 (1:15,000).	
Western Blot: beta-Actin Antibody [NB600-532] - Detection of human and mouse Cytoskeletal Actin by western blot. Samples: Whole cell lysate (50 ug) from HeLa, HEK293T, Jurkat, mouse TCMK-1, and mouse NIH 3T3 cells prepared using NETN lysis buffer. Antibody: Affinity purified rabbit anti-Cytoskeletal Actin antibody NB600-532 used for WB at 0.1 ug/ml. Detection: Chemiluminescence with an exposure time of 1 second.	
Western Blot: beta-Actin Antibody [NB600-532] - Mouse colon whole cell lysate. PVDF membrane was probed with Rabbit Anti-B actin Antibody (Catalog # NB600-532) followed by HRP-conjugated Anti-Rabbit IgG Secondary Antibody. WB image submitted by a verified customer review.	
Immunohistochemistry: beta-Actin Antibody [NB600-532] - Detection of human Cytoskeletal Actin by immunohistochemistry. Sample: FFPE section of human ovarian cancer. Antibody: Affinity purified rabbit anti-Cytoskeletal Actin (NB600-532). Detection: DAB	

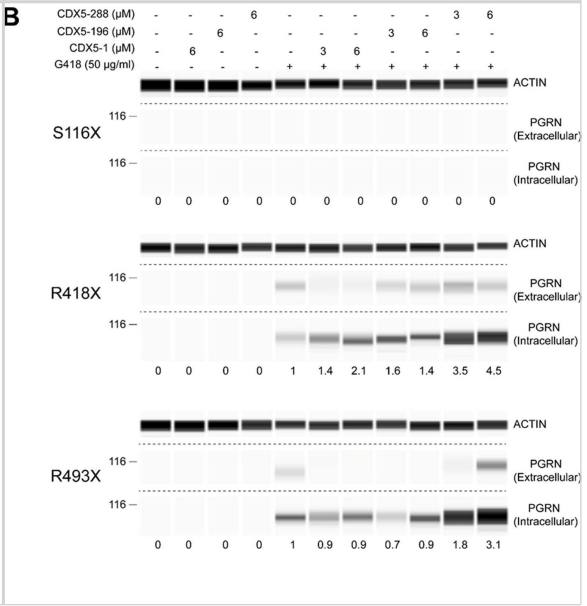
Western Blot: beta-Actin Antibody [NB600-532] - Western blot analysis of Actin (NB600-532) using RCC4 whole cell lysate [NBP1-30412].	
Western Blot: beta-Actin Antibody [NB600-532] - Western blot analysis of Actin (NB600-532) using HepG2 whole cell lysate [NBP1-42569].	
Western Blot: beta-Actin Antibody [NB600-532] - Analysis using the HRP conjugate of NB600-532. Detection of Beta Actin in MCF-7 cell lysate (20ug) using anti-Beta Actin antibody. WB image submitted by a verified customer review.	
Western Blot: beta-Actin Antibody [NB600-532] - Treatments of periplocin and/or TRAIL activate DR4, FADD, and proapoptotic proteins in HCC cells. The effect of periplocin treatment on the expression of DR4, DR5, and FADD was analyzed by western blot. Image collected and cropped by CiteAb from the following publication (https://www.hindawi.com/journals/ecam/2013/958025/), licensed under a CC-BY license.	

Western Blot: beta-Actin Antibody [NB600-532] - Hypoxic preconditioning increases PBMNC sensitivity to apelin-13 via upregulation of APJ expression, leading to growth factor secretion.(a) APJ protein expression was significantly increased in hypoxic PBMNCs. *p <0.05 vs. N-PBMNCs. Image collected and cropped by CiteAb from the following publication (https://www.nature.com/articles/srep19379), licensed under a CC-BY license.	
Immunohistochemistry: beta-Actin Antibody [NB600-532] - Sample: FFPE section of human lung carcinoma. Antibody: Affinity purified rabbit anti-Cytoskeletal Actin used at a dilution of 1:1,000 (1ug/ml). Detection: DAB	
Hypoxic preconditioning increases PBMNC sensitivity to apelin-13 via upregulation of APJ expression, leading to growth factor secretion.(a) APJ protein expression was significantly increased in hypoxic PBMNCs. *p < 0.05 vs. N-PBMNCs. Image collected and cropped by CiteAb from the following publication (https://pubmed.ncbi.nlm.nih.gov/26763337), licensed under a CC-BY licence.	

L. donovani infection induces HIF-1α expression in CD11chi splenic DCs in an IRF-5 dependent manner.Mice were infected with 2x107 amastigotes intravenously. (A) Real-time PCR analysis of HIF-1α mRNA expression in CD11c+ cells purified from C57BL/6 mice at various time points after infection. (B) Immunoblot analysis of HIF-1α expression in CD11c+ cells from C57BL/6 mice (upper panel) and densitometric analysis normalized to ß-actin expression and expressed as fold increase to results obtained with naïve mice (lower panel). (C) Real-time PCR analysis of HIF-1α expression in sorted CD11c+ cells from Irf-5flox/floxCre- and Irf-5flox/floxCMV-Cre+. (D) Immunoblot analysis of Hif-1α expression in CD11c+ cells population of Irf5flox/floxCre- (left upper panel) and Irf-5flox/floxCMV-Cre+ (right upper panel), and densitometric analysis normalized to ß-actin expression and expressed as fold increase to results obtained with naïve mice (lower panels). (E) Real-time PCR analysis of Hif-1α expression in CD11c- splenocytes from Irf-5flox/floxCre- and Irf-5flox/floxCMV-Cre+. (F) Real-time PCR analysis of HIF-1α mRNA expression in BMDC from Irf-5flox/floxCMV-Cre+ and Cre- mice. All data represent mean ± SEM combined from 3 independent experiments. Image collected and cropped by CiteAb from the following open publication (https://dx.plos.org/10.1371/journal.ppat.1004938), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Induction of PTC readthrough by G418 and CDX5 enhancers in cells expressing GRN-V5. a Schematic of full-length PGRN highlighting the position of the S116X (UAA), R418X (UGA), and R493X (UGA) nonsense mutations in relation to the position of individual granulin peptides and the C-terminal V5 tag. b HEK293 cell lines stably expressing GRN-V5 with the indicated nonsense mutations were treated with G418 and the indicated concentrations of CDX5–1, CDX5–196, and CDX5–288 for 72 h. Cell culture supernatants (extracellular) and cell lysates (intracellular) were subjected to automated capillary electrophoresis western analysis. Full-length PGRN was detected with a V5 antibody. Actin was measured in cell lysates as a loading control. The readthrough enhancement ratios are indicated under the lanes. The proportion loaded was 15–20 fold lower for the extracellular samples than for the intracellular samples. Image collected and cropped by CiteAb under a CC-BY license from the following publication: Premature termination codon readthrough upregulates progranulin expression and improves lysosomal function in preclinical models of GRN deficiency. *Mol Neurodegener* (2020). Not internally tested by Novus Biologicals.



Publications

Wang L, Hu X, Wang S et al. MicroRNA analysis reveals the role of miR-214 in duck adipocyte differentiation Animal Bioscience 2022-09-01 [PMID: 35073666] (WB, B/N)

Nguyen MTH, Imanishi M, Li S et al. Endothelial activation and fibrotic changes are impeded by laminar flow-induced CHK1-SENP2 activity through mechanisms distinct from endothelial-to-mesenchymal cell transition Frontiers in Cardiovascular Medicine 2023-08-30 [PMID: 37711550] (B/N)

Nogami M, Sano O, Adachi-Tominari K et al. DNA damage stress-induced translocation of mutant FUS proteins into cytosolic granules and screening for translocation inhibitors Frontiers in Molecular Neuroscience 2022-12-20 [PMID: 36606141] (WB)

Balapattabi K, Farmer GE, Knapp BA et al. Effects of salt-loading on supraoptic vasopressin neurones assessed by ClopHensorN chloride imaging Journal of Neuroendocrinology 2019-08-01 [PMID: 31136029] (Simple Western)

Lotti R, Palazzo E, Quadri M et al. Isolation of an "Early" Transit Amplifying Keratinocyte Population in Human Epidermis: A Role for the Low Affinity Neurotrophin Receptor CD271 Stem Cells 2022-12-31 [PMID: 36037263]

Jovi?i? EJ, Jane□ AP, Eichmann TO et al. Lipid droplets control mitogenic lipid mediator production in human cancer cells Molecular Metabolism 2023-10-01 [PMID: 37586657]

Singh R, Rossini V, Stockdale SR et al. An IBD-associated pathobiont synergises with NSAID to promote colitis which is blocked by NLRP3 inflammasome and Caspase-8 inhibitors Gut Microbes 2023-12-31 [PMID: 36656595] (B/N, IHC)

Mathieu E , Bernard AS , Qu□vrain E et al. Intracellular location matters: rationalization of the anti-inflammatory activity of a manganese(ii) superoxide dismutase mimic complex Chemical Communications 2020-07-21 [PMID: 32520039] (Simple Western)

Miller K, Wagner MA, Jassey A, Jackson WT SNAP23 is essential for germination of EV-D68 replication organelles Virology 2022-12-12 [PMID: 36527930] (WB, Human)

Zhou J, Deng S, Fang H et al. CircSPI1_005 ameliorates osteoarthritis by sponging miR-370-3p to regulate the expression of MAP3K9 International Immunopharmacology 2022-09-01 [PMID: 35978511]

Jassey A, Wagner MA, Galitska G et al. Starvation after infection restricts enterovirus D68 replication Autophagy 2022-04-21 [PMID: 35446171]

Abe, R J, Savage, H Et al. p90RSK-MAGI1 Module Controls Endothelial Permeability by Post-translational Modifications of MAGI1 and Hippo Pathway. Front Cardiovasc Med 2020-12-12 [PMID: 33304925] (Simple Western, Human)

More publications at http://www.novusbio.com/NB600-532

Procedures

Western Blot protocol for beta-Actin Antibody (NB600-532)

Western Blot Protocol

1. Perform SDS-PAGE (4-12%) on samples to be analyzed, loading 20 ug of total protein per lane.

2. Transfer proteins to Nitrocellulose according to the instructions provided by the manufacturer of the transfer apparatus.

3. Stain the blot using ponceau S for 1-2 minutes to access the transfer of proteins onto the nitrocellulose membrane. Rinse the blot in water to remove excess stain and mark the lane locations and locations of molecular weight markers using a pencil.

4. Rinse the blot in TBS for approximately 5 minutes.

5. Block the membrane using 5% non-fat dry milk + 1% BSA in TBS for 1 hour.

6. Dilute the rabbit anti-actin primary antibody (NB 600-532) in blocking buffer and incubate 2 hours at room temperature.

7. Wash the membrane in water for 5 minutes and apply the diluted rabbit-IgG HRP-conjugated secondary antibody in blocking buffer (as per manufacturer's instructions) and incubate 1 hour at room temperature.

8. Wash the blot in TBS containing 0.05-0.1% Tween-20 for 10-20 minutes.

9. Wash the blot in type I water for an additional 10-20 minutes (this step can be repeated as required to reduce background).

10. Apply the detection reagent of choice in accordance with the manufacturer's instructions (Amersham's ECL is the standard reagent used at Novus Biologicals).

Note: Tween-20 can be added to the blocking buffer at a final concentration of 0.05-0.2%, provided it does not interfere
with antibody-antigen binding.

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Products Related to NB600-532

NB800-PC1	HeLa Whole Cell Lysate
HAF008	Goat anti-Rabbit IgG Secondary Antibody [HRP]
NB7160	Goat anti-Rabbit IgG (H+L) Secondary Antibody [HRP]
NBP2-24891	Rabbit IgG Isotype Control

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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