Product Datasheet

beta-Actin Antibody - BSA Free
NB600-532

Unit Size: 0.1 mg

Store at 4C. Do not freeze.

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Reviews: 6 Publications: 70

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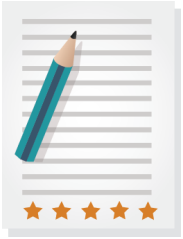
Updated 4/13/2025 v.20.1



NB600-532

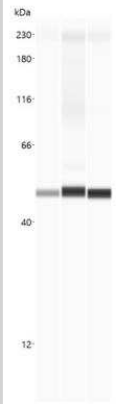
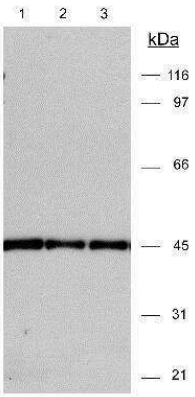
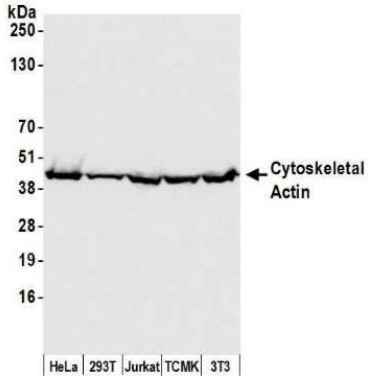
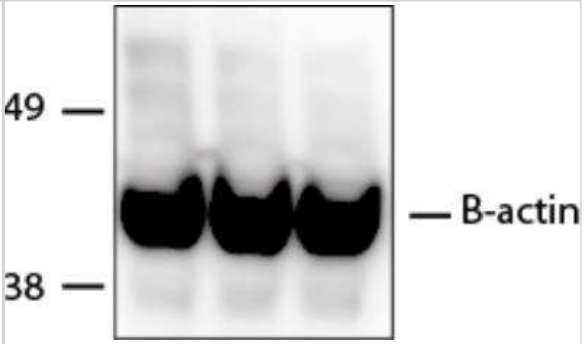
beta-Actin Antibody - BSA Free

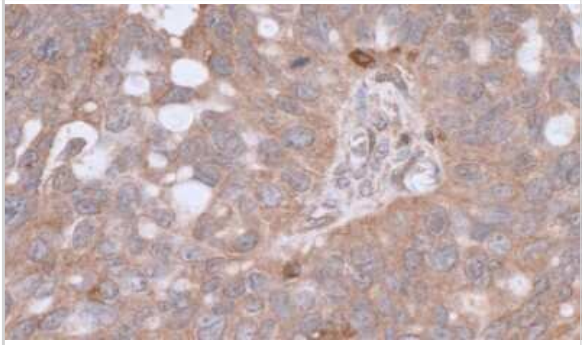
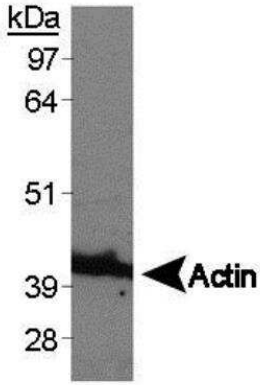
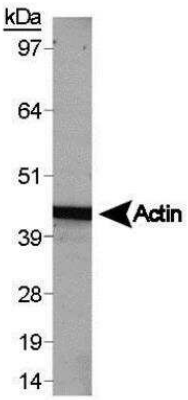
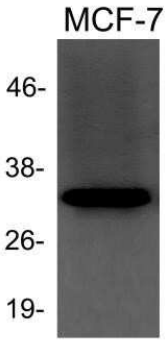
Product Information	
Unit Size	0.1 mg
Concentration	1 mg/ml
Storage	Store at 4C. Do not freeze.
Clonality	Polyclonal
Preservative	0.09% Sodium Azide
Isotype	IgG
Purity	Immunogen affinity purified
Buffer	Tris-Citrate/Phosphate (pH 7.0 - 8.0)
Target Molecular Weight	42 kDa

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]

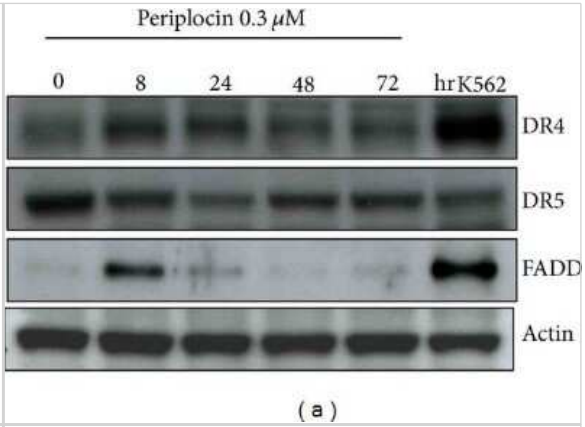
Product Application Details	
Applications	Western Blot, Simple Western, Immunohistochemistry, ICC/IF (Negative), Immunoprecipitation (Negative)
Recommended Dilutions	Western Blot 1:2000-1:10000, Simple Western 1:2000, Immunohistochemistry 1:2000-1:10000, Immunoprecipitation (Negative), ICC/IF (Negative)
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. See Simple Western Antibody Database for Simple Western validation: Tested in Skin, separated by Size, antibody dilution of 1:2000, apparent MW was 49 kDa. Separated by Size-Wes, Sally Sue/Peggy Sue.

Images

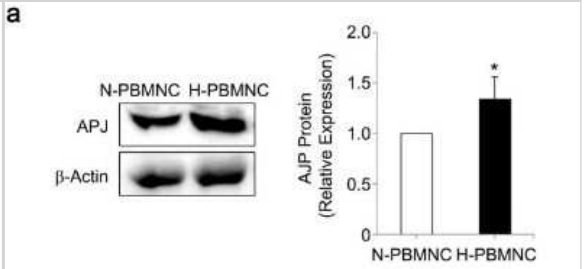
Simple Western: beta-Actin Antibody [NB600-532] - Simple Western lane view shows a specific band for Beta Actin using NB600-532 at 1:200 in A431, C2C12 and C6 cell lysates. This experiment was performed under reducing conditions using the 12-230 kDa separation system.	
Western Blot: beta-Actin Antibody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

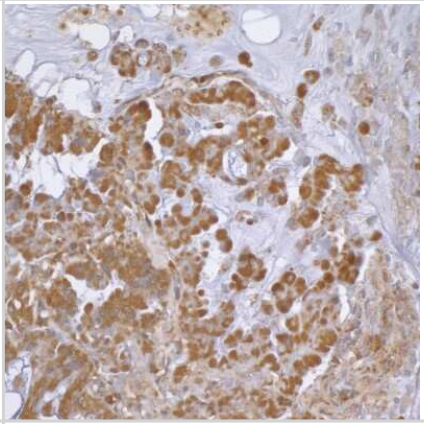
Western Blot: beta-Actin Antibody [NB600-532] - Treatments of periplocin and/or TRAIL activate DR4, FADD, and proapoptotic proteins in HCC cells. The effect of periplocin treatment on the expression of DR4, DR5, and FADD was analyzed by western blot. Image collected and cropped by CiteAb from the following publication (https://www.hindawi.com/journals/ecam/2013/958025/), licensed under a CC-BY license.



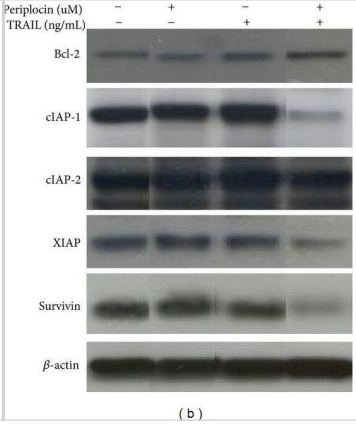
Western Blot: beta-Actin Antibody [NB600-532] - Hypoxic preconditioning increases PBMNC sensitivity to apelin-13 via upregulation of APJ expression, leading to growth factor secretion.(a) APJ protein expression was significantly increased in hypoxic PBMNCs. *p <0.05 vs. N-PBMNCs. Image collected and cropped by CiteAb from the following publication (https://www.nature.com/articles/srep19379), licensed under a CC-BY license.

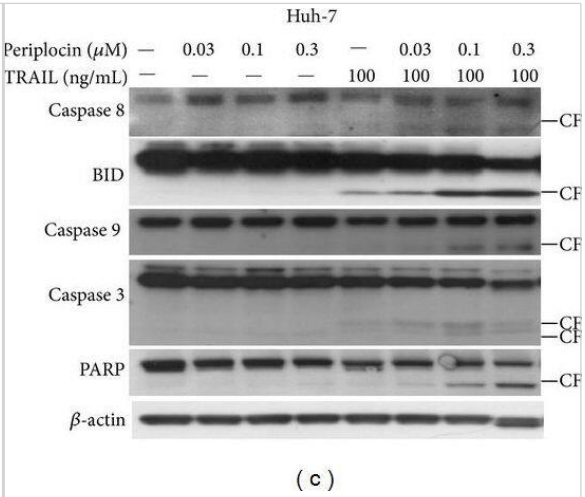
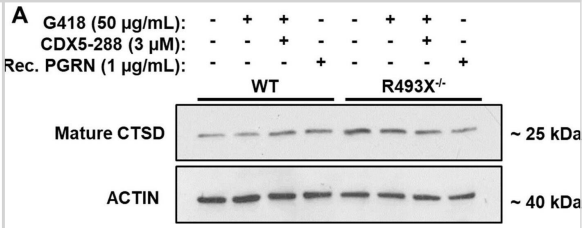


Immunohistochemistry: beta-Actin Antibody [NB600-532] - Sample: FFPE section of human lung carcinoma. Antibody: Affinity purified rabbit anti-Cytoskeletal Actin used at a dilution of 1:1,000 (1ug/ml). Detection: DAB

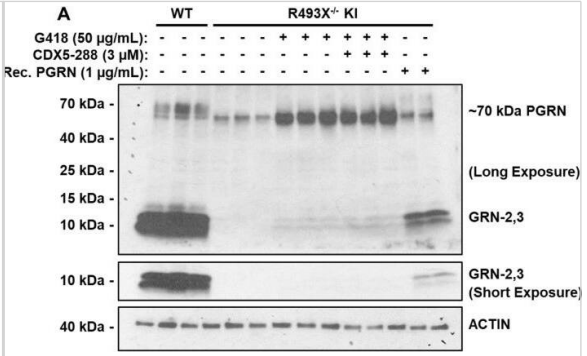


Western Blot: beta-Actin Antibody [NB600-532] - Cotreatment of periplocin & TRAIL activated IAP. (a) The expression levels of Bax, Bad, Mcl-1, apaf-1, & caspase 9 in HA22T/VGH in response to 1 μM periplocin and/or 100 ng/mL TRAIL treatment were examined by western blot. (b) The expression levels of Bcl-2, cIAP-1, cIAP-2, XIAP, & survivin in HA22T/VGH in response to 1 μM periplocin and/or 100 ng/mL TRAIL treatment were examined by western blot. The original blots are shown in supplemental Figure 2. Image collected & cropped by CiteAb from the following publication (https://pubmed.ncbi.nlm.nih.gov/23365613), licensed under a CC-BY license. Not internally tested by Novus Biologicals.

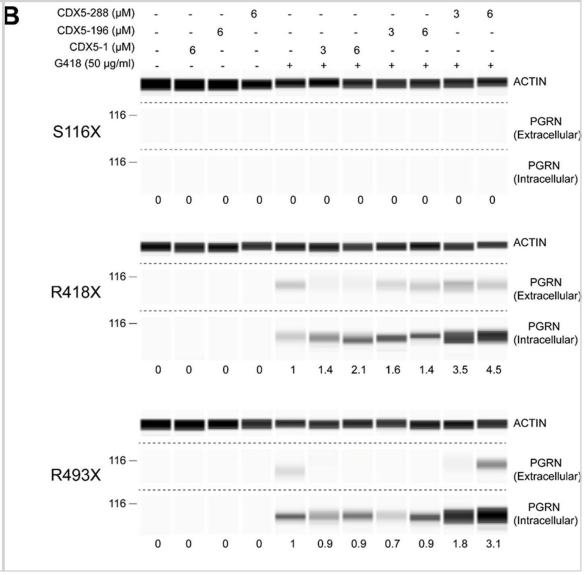


Western Blot: beta-Actin Antibody [NB600-532] - Treatments of periplocin and/or TRAIL activate DR4, FADD, & proapoptotic proteins in HCC cells. (a) The effect of periplocin treatment on the expression of DR4, DR5, & FADD was analyzed by western blot. (b) HA22T/VGH cells were treated with different doses of the indicated compounds for 24 h. Expressions of both proforms & cleaved forms of caspase-8, caspase 3, PARP, & BID were analyzed by western blotting. (c) Huh-7 cells were treated with different concentrations of the indicated compounds for 4 h or 24 h. The expression of caspase-8, caspase-9 was analyzed after indicated compounds treatment for 4 h, & the expression of caspase 3, PARP, BID was analyzed after the treatment of indicated compounds for 24 h. (d) HA22T/VGH cells were pretreated with 20 μM or 50 μM inhibitors against caspase-3 (Z-DEVD-FMK), caspasae-8 (Z-IETD-FMK), caspase-9 (Z-LEHD-FMK), & general caspase inhibitor (Z-VAD-FMK) for 3 hours prior to periplocin and/or TRAIL treatment. Cell viability was examined by MTT assay. Image collected & cropped by CiteAb from the following publication (https://pubmed.ncbi.nlm.nih.gov/23365613), licensed under a CC-BY license. Not internally tested by Novus Biologicals.	
Western Blot: beta-Actin Antibody [NB600-532] - GRN PTC readthrough rescues FTLD/NCL lysosomal pathological CSTD maturation phenotype in hiPSC-derived R493X−/− KI cortical neurons. a DIV 80 WT & R493X−/− KI hiPSC-derived cortical neurons were treated with vehicle solution, G418 alone, G418 in combination with CDX5–288, & rec. Human PGRN at the indicated concentrations for 72 h. Expression of mature CSTD in treated WT & R493X−/− KI cortical neuron lysates analyzed by western blotting, using actin as the loading control. b Densitometric quantification of CSTD expression in the aforementioned cortical neuron lysates normalized to vehicle-treated WT levels. n = 3–6 independent cultures; values are shown as mean ± SEM; * p < 0.05, ** p < 0.01, was determined by one-way ANOVA with Tukey's multiple comparison test Image collected & cropped by CiteAb from the following publication (https://pubmed.ncbi.nlm.nih.gov/32178712), licensed under a CC-BY license. Not internally tested by Novus Biologicals.	

Western Blot: beta-Actin Antibody [NB600-532] - Induction of PTC readthrough by G418 & enhancers in hiPSC-derived R493X−/− KI astrocytes. a R493X−/− KI hiPSC-derived astrocytes were treated with vehicle solution, G418 alone, G418 in combination with CDX5–288, & rec. Human PGRN at the indicated concentrations for 72 h. Expression of PGRN & GRN-2,3 peptides in treated WT & R493X−/− KI astrocyte samples were analyzed by western blotting, using actin as the loading control. b Densitometric quantification of ~ 70 kDa PGRN (i) & GRN-2,3 peptide (ii) in astrocyte lysates (a) normalized to vehicle-treated (VT) WT levels. VT WT was excluded from ii due to oversaturation of GRN-2,3 signal in long exposure blot. For clarity, rec. Human PGRN treated R493X−/− KI astrocytes expressed 20.9% ± 0.027 of VT WT GRN-2,3 levels based on quantification of the short exposure blot (data not shown). c R493X−/− KI hiPSC-derived astrocytes were treated with vehicle solution, G418 in combination with CDX5–288, & G418 CDX5–288 combination with either 10 or 30 µM of Z-Phe-Phe-FMK for 72 h. Again, expression of PGRN in WT & R493X−/− KI astrocyte lysates was also analyzed by western blotting, using actin as the loading control. d Densitometric quantification of full-length PGRN in astrocyte lysates (c) normalized to VT WT levels. n = 3 independent cultures (except in dn = 2); values are shown as mean ± SEM; $p < 0.05$, ** $p < 0.01$, *** $p < 0.0001$ was determined by one-way ANOVA with Tukey's multiple comparison test Image collected & cropped by CiteAb from the following publication (https://pubmed.ncbi.nlm.nih.gov/32178712), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Simple Western: beta-Actin Antibody [NB600-532] - Induction of PTC readthrough by G418 & CDX5 enhancers in cells expressing GRN-V5. a Schematic of full-length PGRN highlighting the position of the S116X (UAA), R418X (UGA), & R493X (UGA) nonsense mutations in relation to the position of individual granulin peptides & the C-terminal V5 tag. b HEK293 cell lines stably expressing GRN-V5 with the indicated nonsense mutations were treated with G418 & the indicated concentrations of CDX5–1, CDX5–196, & CDX5–288 for 72 h. Cell culture supernatants (extracellular) & 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 & cropped by CiteAb from the following publication (https://pubmed.ncbi.nlm.nih.gov/32178712), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Publications

Galitska G, Jassey A, Wagner MA et Al. Enterovirus D68 capsid formation and stability requires acidic compartments mBio 2023-01-01 [PMID: 37819109]

Park S, Silva E, Singhal A et Al. A deep learning model of tumor cell architecture elucidates response and resistance to CDK4/6 inhibitors Nat Cancer 2024-03-05 [PMID: 38443662]

Yu Z, Chen D, Su Z et al. miR-886-3p upregulation in clear cell renal cell carcinoma regulates cell migration, proliferation and apoptosis by targeting PITX1. Int. J Mol. Med. 2014-11-01 [PMID: 25190136]

Moriwaki M, Moore B, Mosbruger T et Al. POLR2C Mutations Are Associated With Primary Ovarian Insufficiency in Women J Endocr Soc 2017-03-01 [PMID: 29367954]

Bilkei-Gorzo A, Schurmann B, Schneider M et al. Bidirectional Effect of Long-Term Δ 9 -Tetrahydrocannabinol Treatment on mTOR Activity and Metabolome. ACS pharmacology & translational science 2024-09-13 [PMID: 39296258]

Maida Jusović, Pia Starič, Eva Jarc Jovičić, Toni Petan, Zsolt Balogi, Laszlo Vigh The Combined Inhibition of Autophagy and Diacylglycerol Acyltransferase-Mediated Lipid Droplet Biogenesis Induces Cancer Cell Death during Acute Amino Acid Starvation Cancers 2023-10-05 [PMID: 37835551]

Varga K, Gyurina K, Radványi Á et al. Stimulator of Interferon Genes (STING) Triggers Adipocyte Autophagy Cells 2023-09-24 [PMID: 37830559]

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] (Western Blot, Block/Neutralize)

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] (Block/Neutralize)

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] (Western Blot)

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] (Simple Western)

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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