Product Datasheet

Glucose 6 Phosphate Dehydrogenase Antibody - BSA Free
NB100-236

Unit Size: 100 ul

Store at 4C. Do not freeze.

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Publications: 19

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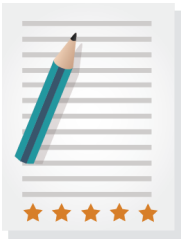
Updated 2/21/2025 v.20.1



NB100-236

Glucose 6 Phosphate Dehydrogenase Antibody - BSA Free

Product Information

Unit Size	100 ul
Concentration	1.0 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)

Product Description

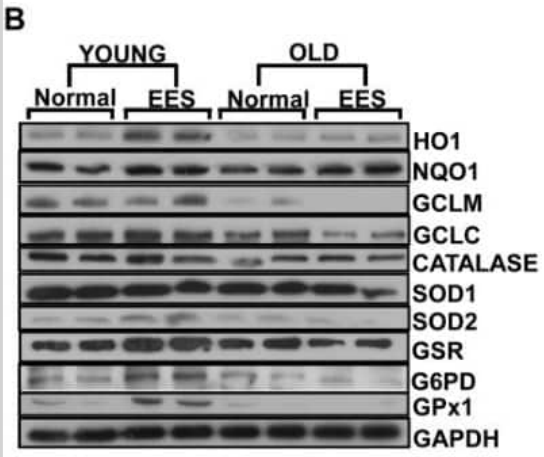
Host	Rabbit
Gene ID	2539
Gene Symbol	G6PD
Species	Human, Mouse
Marker	Cytosol Marker
Immunogen	The immunogen recognized by this antibody maps to a region between residues 50 and 100 of human Glucose-6-Phosphate Dehydrogenase using the numbering given in entry NP_000393.2 (GeneID 2539).

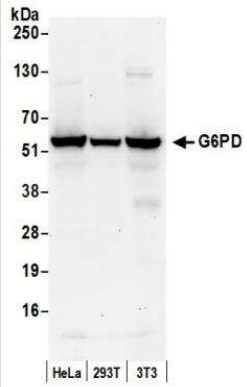
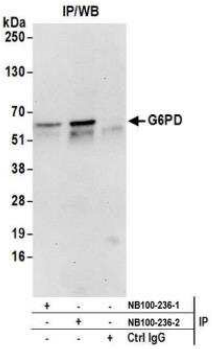
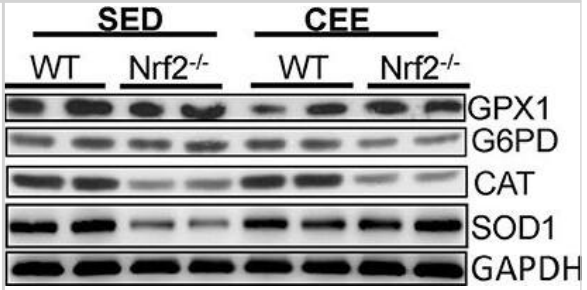
Product Application Details

Applications	Western Blot, Immunoblotting, Immunohistochemistry, Immunohistochemistry-Frozen, Immunoprecipitation
Recommended Dilutions	Western Blot 1:500-1:2500, Immunohistochemistry, Immunoprecipitation 2-10 ug/mg of lysate, Immunohistochemistry-Frozen 1:10-1:500, Immunoblotting
Application Notes	Use in IHC-Frozen reported in scientific literature (PMID: 17693254). Use in Immunoblotting reported in scientific literature (PMID 28515695).

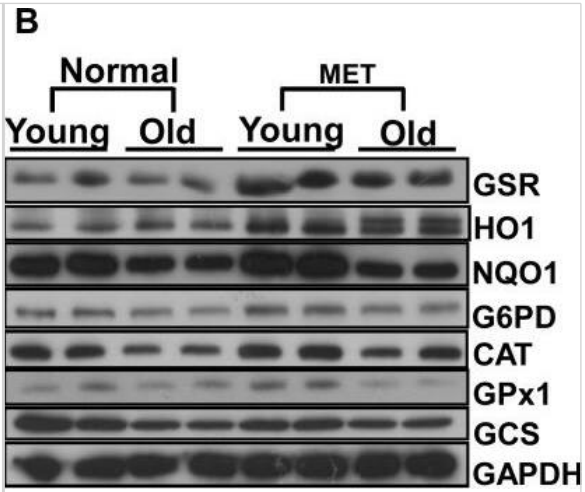
Images

Western Blot: Glucose 6 Phosphate Dehydrogenase Antibody [NB100-236] - Immunoblot analyses of protein expression for Nrf2 and antioxidant enzymes. Representative immunoblots of cytosolic extracts from the hearts of young and old mice under basal conditions and following EES. Protein blots were probed with anti-HO1, NQO1, GCLM, GCLC, Catalase, SOD1, SOD2, GSR, G6PD, GPX1 and GAPDH. Individual lanes indicate a single animal. Densitometry analysis of respective protein signals was performed using Image-J and expressed as relative intensity units calculated as mean values of young and old, *p<0.05. Individual lanes indicate each animal (n?=?6). #p<0.05- between basal and EES. Image collected and cropped by CiteAb from the following publication (https://dx.plos.org/10.1371/journal.pone.0045697), licensed under a CC-BY license.



Western Blot: Glucose 6 Phosphate Dehydrogenase Antibody [NB100-236] - Detection of Human and Mouse G6PD by Western Blot. Samples: Whole cell lysate (50 ug) from HeLa, 293T, and mouse NIH3T3 cells prepared using NETN lysis buffer. Antibody: Affinity purified rabbit anti-G6PD antibody NB100-236 used for WB at 1 ug/ml. Detection: Chemiluminescence with an exposure time of 30 seconds.	
Immunoprecipitation: Glucose 6 Phosphate Dehydrogenase Antibody [NB100-236] - Detection of mouse G6PD by western blot of immunoprecipitates. Samples: Whole cell lysate (0.5 or 1.0 mg per IP reaction; 20% of IP loaded) from NIH 3T3 cells prepared using NETN lysis buffer. Antibodies: Affinity purified rabbit anti-G6PD antibody NB100 -236 (lot 2) used for IP at 6 ug per reaction. G6PD was also immunoprecipitated by a previous lot of this antibody (lot 1). For blotting immunoprecipitated G6PD, NB100-236 was used at 1 ug/ml. Detection: Chemiluminescence with an exposure time of 30 seconds.	
Western Blot: Glucose 6 Phosphate Dehydrogenase Antibody [NB100-236] - Dysregulation of Antioxidant proteins in response to chronic endurance exercise in aged Nrf2−/− mice hearts. Antioxidant protein expression (GPX1, CAT, G6PD, & SOD1) were determined using immunoblotting with specific antibodies. The relative intensity signals were quantified using ImageJ software & normalized to GAPDH intensity & represented as histogram. Experiments were analyzed using one way ANOVA followed by Tukey multiple comparison tests & differences between the means were considered statistically significant if P < 0.05 (* vs. WT-SED, # vs. Nrf2−/−-SED, $ vs. WT CEE). Image collected & cropped by CiteAb from the following publication (http://journal.frontiersin.org/article/10.3389/fphys.2017.00268/full), licensed under a CC-BY license. Not internally tested by Novus Biologicals.	

Western Blot: Glucose 6 Phosphate Dehydrogenase Antibody [NB100-236] - Effect of prolonged moderate exercise on Nrf2/ARE-Antioxidants in the aging heart.Representative immunoblots of cytosolic extracts from the hearts of young & old mice under basal conditions & following 6-weeks of moderate exercise training (MET). Protein blots were probed with respective antibodies as indicated. Individual lanes represent separate animals (n=4–6/group). A. Analysis of nuclear Nrf2 in young & old mice subjected to MET. In sedentary mice, Nrf2 protein levels were decreased significantly in old when compared to young (*p<0.05). Following MET, nuclear Nrf2 levels were significantly increased in old mice to levels equivalent to those of young mice (#, $p<0.05 in MET vs. respective basal). (B) Densitometry analysis of respective protein signals were performed using Image-J & expressed relative to mean values of the sedentary-young group. Under basal conditions, a significant decrease in the protein levels of GSR, G6PD, NQO1, catalase, GPX1 & GCS were observed in the heart tissues of old when compared to young mice. Following 6-weeks of moderate exercise, most of the antioxidants were significantly (*p<0.05) upregulated or stabilized in the aging heart. Image collected & cropped by CiteAb from the following publication (https://dx.plos.org/10.1371/journal.pone.0045697), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Publications

Zhang N, Zhang Z, He R et al. GLAST-CreER(T2) mediated deletion of GDNF increases brain damage and exacerbates long-term stroke outcomes after focal ischemic stroke in mouse model Glia 2020-06-04 [PMID: 32497340]

Ouyang X, Wani W, Benavides G et al. Cathepsin D overexpression in the nervous system rescues lethality and A?42 accumulation of cathepsin D systemic knockout in vivo Acta Pharmaceutica Sinica B 2023-07-01 (WB, Mouse)

Shanmugam G, Narasimhan M, Conley RL et al. Chronic Endurance Exercise Impairs Cardiac Structure and Function in Middle-Aged Mice with Impaired Nrf2 Signaling. Front Physiol 2017-05-18 [PMID: 28515695] (IB, Mouse)

Shanmugam G, Narasimhan M, Sakthivel R et al. A biphasic effect of TNF-a in regulation of the Keap1/Nrf2 pathway in cardiomyocytes Redox Biol 2016-06-27 [PMID: 27423013]

Rajasekaran NS, Connell P, Christians ES et al. Human alpha B-crystallin mutation causes oxido-reductive stress and protein aggregation cardiomyopathy in mice. Cell 2007-08-10 [PMID: 17693254] (IHC-Fr, Mouse)

Jeon SM, Chandel NS, Hay N et al. AMPK regulates NADPH homeostasis to promote tumour cell survival during energy stress. Nature 2012-05-01 [PMID: 22660331]

Spencer NY, Yan Z, Boudreau RL et al. Control of hepatic nuclear superoxide production by glucose 6-phosphate dehydrogenase and NADPH oxidase-4. J Biol Chem 2011-03-01 [PMID: 21212270]

Zhang Z, Liew CW, Handy DE et al. High glucose inhibits glucose-6-phosphate dehydrogenase, leading to increased oxidative stress and beta-cell apoptosis. FASEB J 2010-05-01 [PMID: 20032314]

Pan S, World CJ, Kovacs CJ et al. Glucose 6-phosphate dehydrogenase is regulated through c-Src-mediated tyrosine phosphorylation in endothelial cells. Arterioscler Thromb Vasc Biol 2009-06-01 [PMID: 19359662]

Iwashima F, Yoshimoto T, Minami I et al. Aldosterone induces superoxide generation via Rac1 activation in endothelial cells. Endocrinology 2008-03-01 [PMID: 18079208]

Funes JM, Quintero M, Henderson S et al. Transformation of human mesenchymal stem cells increases their dependency on oxidative phosphorylation for energy production. Proc Natl Acad Sci U S A 2007-04-01 [PMID: 17384149]

Matsui R, Xu S, MaitlKA et al. Glucose-6-phosphate dehydrogenase deficiency decreases vascular superoxide and atherosclerotic lesions in apolipoprotein E(-/-) mice. Arterioscler Thromb Vasc Biol 2006-04-01 [PMID: 16439706]

More publications at http://www.novusbio.com/NB100-236

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Products Related to NB100-236

NBL1-10899	Glucose 6 Phosphate Dehydrogenase Overexpression 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

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