

# Product Datasheet

## Cytochrome c Antibody (7H8.2C12) - BSA Free NB100-56503

Unit Size: 0.1 mg

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

[www.novusbio.com](http://www.novusbio.com)



[technical@novusbio.com](mailto:technical@novusbio.com)

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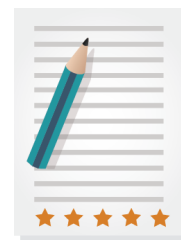
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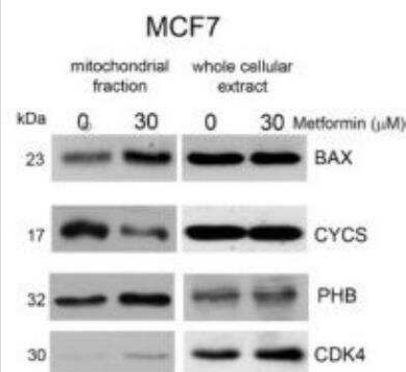


**NB100-56503****Cytochrome c Antibody (7H8.2C12) - BSA Free**

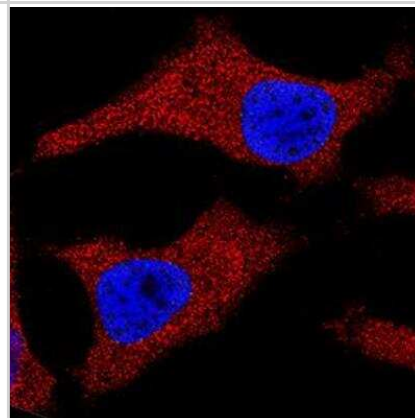
<b>Product Information</b>	
<b>Unit Size</b>	0.1 mg
<b>Concentration</b>	1.0 mg/ml
<b>Storage</b>	Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.
<b>Clonality</b>	Monoclonal
<b>Clone</b>	7H8.2C12
<b>Preservative</b>	0.05% Sodium Azide
<b>Isotype</b>	IgG2b Kappa
<b>Purity</b>	Protein G purified
<b>Buffer</b>	PBS
<b>Product Description</b>	
<b>Host</b>	Mouse
<b>Gene ID</b>	54205
<b>Gene Symbol</b>	CYCS
<b>Species</b>	Human, Mouse, Rat, Drosophila, Rabbit
<b>Marker</b>	Mitochondria Marker
<b>Specificity/Sensitivity</b>	This antibody recognizes total cytochrome C which includes both apocytochrome (i.e. cytochrome in the cytosol without heme attached) and holocytochrome (i.e. cytochrome in the mitochondria with heme attached).
<b>Immunogen</b>	Synthetic peptides corresponding to amino acids 1-80, 81-104 and 66-104 of pigeon CYT were used as the immunogen (Jemmerson et al. 1991). The antibody recognizes an epitope within amino acids 93-104 of pigeon cytochrome C based on competitive ELISA results (Jemmerson et al. 1991).
<b>Product Application Details</b>	
<b>Applications</b>	Western Blot, Simple Western, Flow Cytometry, Flow (Cell Surface), Flow (Intracellular), Immunoblotting, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Paraffin
<b>Recommended Dilutions</b>	Western Blot 0.05-0.5 ug/ml, Simple Western 2.5 ug/ml, Flow Cytometry 1:20-1:2000, Immunohistochemistry 1:10-1:500, Immunocytochemistry/ Immunofluorescence 1:10-1:500. Use reported in scientific literature (Yamasaki et al (2006)), Immunohistochemistry-Paraffin 1:10-1:500. Use reported in scientific literature (Fujimara et al (1998)), Immunoblotting reported in scientific literature (PMID 16436379), Flow (Cell Surface) reported in scientific literature (PMID 16467206), Flow (Intracellular) reported in scientific literature (Mohr et al (2004))
<b>Application Notes</b>	An approx. 15 kDa band is observed. See <a href="#">Simple Western Antibody Database</a> for Simple Western validation: tested in human heart tissue lysate; separated by Size-Jess/Wes, Sally Sue/Peggy Sue, antibody dilution of 2.5 ug/ml; matrix was 12-230 kDa.

## Images

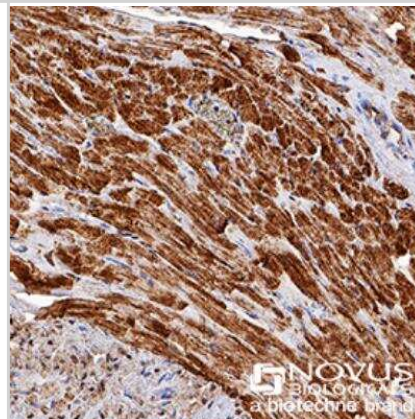
**Western Blot: Cytochrome c Antibody (7H8.2C12) [NB100-56503] - Metformin activates apoptotic cell death;** Right panel: MCF-7 cells were kept in the presence or absence of metformin for 20 days and then processed to obtain mitochondrial or whole cellular extracts. BAX and CYCS expression levels were determined by Western blot as indicated under Material and Methods. Densitometric analysis of the gels was performed as indicated under Material and Methods. PHB and CDK4 were used as purity and loading controls. Image collected and cropped by CiteAb from the following publication (<https://www.mdpi.com/2073-4409/8/1/49>), licensed under a CC-BY license.



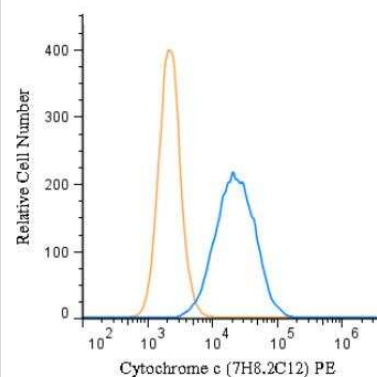
**Immunocytochemistry/Immunofluorescence: Cytochrome c Antibody (7H8.2C12) [NB100-56503] - p73** was detected in immersion fixed Hela human cell line using NB100-56503 at 25 ug/ml for 3 hours at room temperature. Cells were stained using the NorthernLights(TM) 557-conjugated Anti-Mouse IgG Secondary Antibody (red; Catalog # NL007) and counterstained with DAPI (blue). Staining was observed in the cytoplasm and mitochondria.



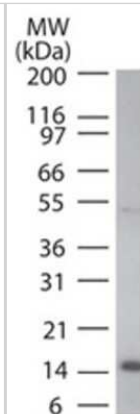
**Immunohistochemistry-Paraffin: Cytochrome c Antibody (7H8.2C12) [NB100-56503] - Cytochrome C** was detected in immersion fixed paraffin-embedded sections of human heart using anti-human mouse monoclonal antibody (Catalog # NB100-56503) at 1:200 dilution overnight at 4C. Tissue was stained using the VisuCyte anti-mouse HRP polymer detection reagent (Catalog # VC001) with DAB chromogen (brown) and counterstained with hematoxylin (blue). Images may not be copied, printed or otherwise disseminated without express written permission of Novus Biologicals a bio-techne brand.



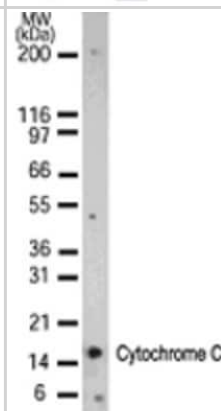
**Flow (Intracellular): Cytochrome c Antibody (7H8.2C12) [NB100-56503] -** An intracellular stain was performed on HeLa cells with Cytochrome c (7H8.2C12) antibody NB100-56503PE (blue) and a matched isotype control (orange). Cells were fixed with 4% PFA and then permeabilized with 0.1% saponin. Cells were incubated in an antibody dilution of 5 ug/mL for 30 minutes at room temperature. Both antibodies were conjugated to phycoerythrin.



Western Blot: Cytochrome c Antibody (7H8.2C12) [NB100-56503] - Human HeLa lysate probed with Cytochrome C antibody at 0.1 ug/ml.

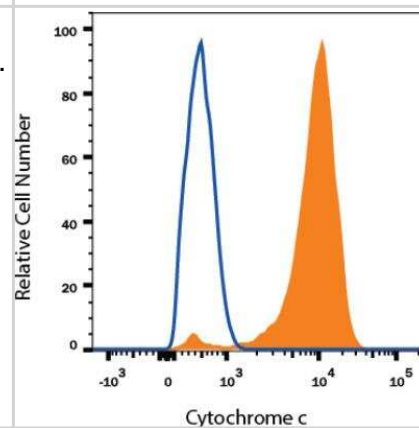


Western Blot: Cytochrome c Antibody (7H8.2C12) [NB100-56503] - Analysis using the biotin conjugate of NB100-56503. Detection of Cytochrome C in 15 ug of HeLa cell lysate using NB100-55775 at 1:1000. A 15 kDa band is detected.

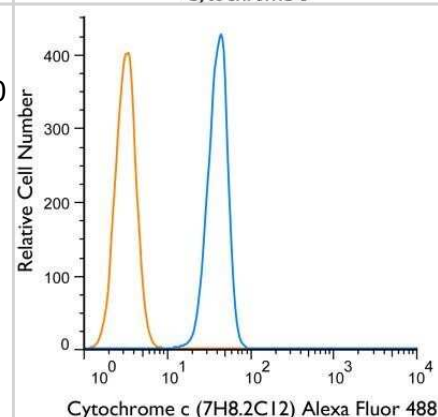


Flow Cytometry: Cytochrome c Antibody (7H8.2C12) [NB100-56503] - Detection of Cytochrome C in Human HeLa Cell Line by Flow Cytometry. Human HeLa cell line was stained with Mouse Anti- Cytochrome C Monoclonal Antibody (Catalog # NB100-56503, filled histogram), or Mouse IgG2B isotype control (Catalog # MAB0041, open histogram) followed by APC-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # F0101B). To facilitate intracellular staining, cells were fixed with Flow Cytometry Fixation Buffer (Catalog # FC004) and permeabilized with Flow Cytometry Permeabilization/Wash Buffer I (Catalog # FC005).

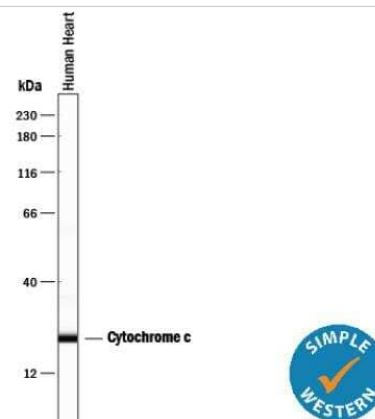
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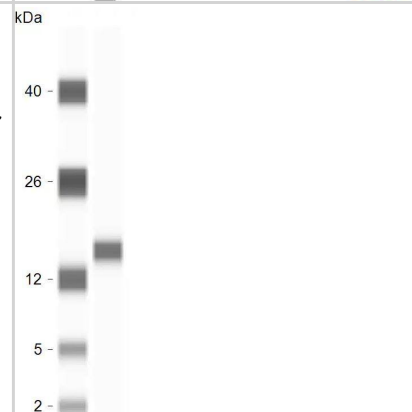
Flow Cytometry: Cytochrome c Antibody (7H8.2C12) [NB100-56503] - Using the Alexa Fluor 488 direct conjugate, an intracellular stain was performed on HeLa cells with Cytochrome c (7H8.2C12) antibody NB100-56503AF488 (blue) and a matched isotype control NBP2-27231AF488 (orange). Cells were fixed with 4% PFA and then permeabilized with 0.1% saponin. Cells were incubated in an antibody dilution of 10 ug/mL for 30 minutes at room temperature. Both antibodies were conjugated to Alexa Fluor 488.



Simple Western: Cytochrome c Antibody (7H8.2C12) [NB100-56503] - Lane view shows lysates of human heart tissue, loaded at 0.2 mg/mL. A specific band was detected for Cytochrome c at approximately 23 kDa (as indicated) using 2.5 ug/mL of Mouse Anti-Cytochrome c Monoclonal Antibody (Catalog # NB100-56503). This experiment was conducted under reducing conditions and using the 12-230 kDa separation system.

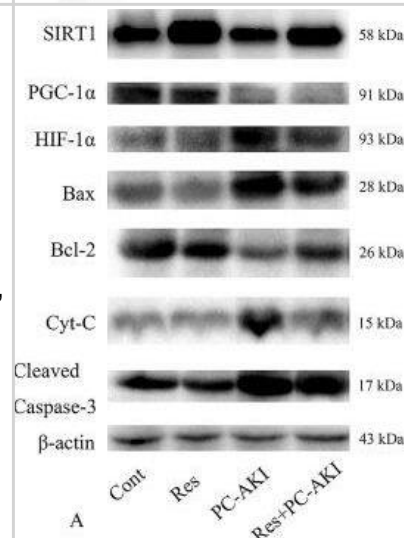


Simple Western: Cytochrome c Antibody (7H8.2C12) [NB100-56503] - Cytochrome C Antibodies (NB100-56503SS), ProteinSimple Western Blot on Jess Instrument; 1 microgram of human brain tissue lysate was tested with the antibodies diluted 20 times. Image from verified customer review.



Effects of resveratrol on the expression of SIRT1, PGC-1 $\alpha$ , HIF-1 $\alpha$  & apoptosis proteins in vivo. (A) Activation of the SIRT1–PGC-1 $\alpha$ –HIF-1 $\alpha$  signaling pathway in PC–AKI associated with DN in rabbits.

Representative western blot images of proteins in the rabbits with DN treated with saline (Cont), resveratrol alone (Res), iohexol (PC–AKI), & co-treatment with resveratrol & iohexol (Res+PC–AKI). (B–H) Relative densitometry analysis of the ratios of SIRT1–PGC-1 $\alpha$ –HIF-1 $\alpha$  signaling proteins to  $\beta$ -actin were expressed as mean  $\pm$  standard error. \* $P < 0.05$  vs. Cont; # $P < 0.05$  vs. PC–AKI. Cont, control; Res, resveratrol; PC–AKI, post-contrast acute kidney injury; SIRT1, silent information regulator I; HIF-1 $\alpha$ , hypoxia-inducible transcription factor-1 $\alpha$ ; DN, diabetic nephropathy; PGC-1 $\alpha$ , peroxisome proliferator-activated receptor gamma coactivator-1 alpha. Image collected & cropped by CiteAb from the following publication (<https://pubmed.ncbi.nlm.nih.gov/31402864>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



## Publications

Equine metabolic syndrome impairs adipose stem cells osteogenic differentiation by predominance of autophagy over selective mitophagy *J Cell Mol Med*, 2016-09-14;0(0):. 2016-09-14 [PMID: 27629697]

Li S, Chen X, Guan S et al. Precisely Amplifying Intracellular Oxidative Storm by Metal-Organic Coordination Polymers to Augment Anticancer Immunity *ACS nano* 2023-07-25 [PMID: 37490051]

Oikawa R, Watanabe Y, Yotsuyanagi H et al. DNA methylation at hepatitis B virus integrants and flanking host mitochondrially encoded cytochrome C oxidase III *Oncology letters* 2022-12-01 [PMID: 36284651] (WB, Human)

Liu Z, Liu Q, Zhang B et al. Blood-Brain Barrier Permeable and NO-Releasing Multifunctional Nanoparticles for Alzheimer's Disease Treatment: Targeting NO/cGMP/CREB Signaling Pathways *Journal of medicinal chemistry* 2021-09-23 [PMID: 34517696]

Zhao S, Chen W, Li W et al. LncRNA TUG1 attenuates ischaemia-reperfusion-induced apoptosis of renal tubular epithelial cells by sponging miR-144-3p via targeting Nrf2 *Journal of cellular and molecular medicine* 2021-09-21 [PMID: 34547172] (WB, Mouse)

Hu F, Wu Y, Liu C Et al. Penicillin disrupts mitochondrial function and induces autophagy in colorectal cancer cell lines *Oncology letters* 2021-10-01 [PMID: 34457046] (WB, Human)

Wang Y, Liao J, Chen K Et Al. Lumbrokinase regulates endoplasmic reticulum stress through IRE1 signaling to improve neurological deficits in ischemic stroke *Research Square* 2021-07-08 [PMID: 36223864]

Deng X, Yang P, Gao T et al. Allicin attenuates myocardial apoptosis, inflammation and mitochondrial injury during hypoxia-reoxygenation: an in vitro study *BMC cardiovascular disorders* 2021-04-21 [PMID: 33882833]

Nam YW, Kong D, Wang D, et al. Differential modulation of SK channel subtypes by phosphorylation *Cell calcium* 2021-01-06 [PMID: 33422768] (WB, Mouse)

Chinta S J, Rane A et al. Reactive oxygen species regulation by AIF- and complex I-depleted brain mitochondria. *Free Radic Biol Med* 2009-01-04 [PMID: 19280713] (WB, Mouse)

Rizwan H, Pal S, Sabnam S, Pal A High glucose augments ROS generation regulates mitochondrial dysfunction and apoptosis via stress signalling cascades in keratinocytes *Life Sci.* 2019-12-09 [PMID: 31830478] (WB, Mouse)

Yoon JH, Shin JW, Pham TH Methyl lucidone induces apoptosis and G2/M phase arrest via the PI3K/Akt/NF-kappa B pathway in ovarian cancer cells *Pharm Biol* 2020-12-01 [PMID: 31875458] (WB, Human)

More publications at <http://www.novusbio.com/NB100-56503>





### **Novus Biologicals USA**

10730 E. Briarwood Avenue  
Centennial, CO 80112  
USA  
Phone: 303.730.1950  
Toll Free: 1.888.506.6887  
Fax: 303.730.1966  
nb-customerservice@bio-techne.com

### **Bio-Techne Canada**

21 Canmotor Ave  
Toronto, ON M8Z 4E6  
Canada  
Phone: 905.827.6400  
Toll Free: 855.668.8722  
Fax: 905.827.6402  
canada.inquires@bio-techne.com

### **Bio-Techne Ltd**

19 Barton Lane  
Abingdon Science Park  
Abingdon, OX14 3NB, United Kingdom  
Phone: (44) (0) 1235 529449  
Free Phone: 0800 37 34 15  
Fax: (44) (0) 1235 533420  
info.EMEA@bio-techne.com

### **General Contact Information**

www.novusbio.com  
Technical Support: nb-technical@bio-techne.com  
Orders: nb-customerservice@bio-techne.com  
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NB720-B	Rabbit anti-Mouse IgG (H+L) Secondary Antibody [Biotin]
NBP1-43317-0.5mg	Mouse IgG2b Kappa Light Chain Isotype Control (MG2b)

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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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