

# Product Datasheet

## **Dihydrofolate Reductase/DHFR Antibody (2B10) - Azide and BSA Free H00001719-M01**

Unit Size: 0.1 mg

Aliquot and store at -20C or -80C. Avoid freeze-thaw cycles.

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Updated 2/21/2025 v.20.1

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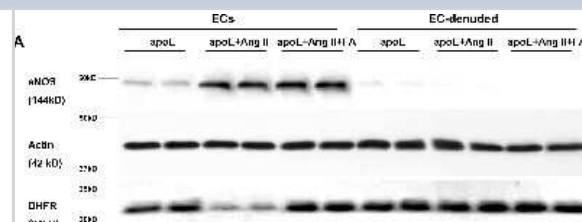


**H00001719-M01****Dihydrofolate Reductase/DHFR Antibody (2B10) - Azide and BSA Free**

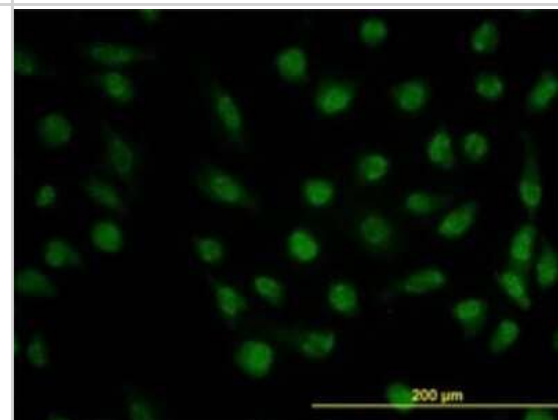
<b>Product Information</b>	
<b>Unit Size</b>	0.1 mg
<b>Concentration</b>	Concentrations vary lot to lot. See vial label for concentration. If unlisted please contact technical services.
<b>Storage</b>	Aliquot and store at -20C or -80C. Avoid freeze-thaw cycles.
<b>Clonality</b>	Monoclonal
<b>Clone</b>	2B10
<b>Preservative</b>	No Preservative
<b>Isotype</b>	IgG2a Kappa
<b>Purity</b>	Protein A purified
<b>Buffer</b>	In 1x PBS, pH 7.4
<b>Product Description</b>	
<b>Description</b>	Quality control test: Antibody Reactive Against Recombinant Protein.
<b>Host</b>	Mouse
<b>Gene ID</b>	1719
<b>Gene Symbol</b>	DHFR
<b>Species</b>	Human, Mouse, Rat, Yeast
<b>Reactivity Notes</b>	Mouse reactivity reported in scientific literature (PMID: 24558445). Please note that this antibody is reactive to Mouse and derived from the same host, Mouse. Additional Mouse on Mouse blocking steps may be required for IHC and ICC experiments. Please contact Technical Support for more information.
<b>Specificity/Sensitivity</b>	DHFR (2B10)
<b>Immunogen</b>	DHFR (AAH03584, 88 a.a. ~ 187 a.a) partial recombinant protein with GST tag. MW of the GST tag alone is 26 KDa. HFLSRSLDDALKLTEQPELANKVDMVWIVGGSSVYKEAMNHPGHLKLFVTRIM QDFESDTFFPEIDLEKYKLLPEYPGVLSDVQEEKGIKYKFEVYEKND
<b>Notes</b>	This product is produced by and distributed for Abnova, a company based in Taiwan.
<b>Product Application Details</b>	
<b>Applications</b>	Western Blot, ELISA, Immunocytochemistry/ Immunofluorescence, Sandwich ELISA
<b>Recommended Dilutions</b>	Western Blot 1:500, ELISA, Immunocytochemistry/ Immunofluorescence 1:10-1:2000, Sandwich ELISA 1:10-1:2000
<b>Application Notes</b>	Antibody reactivity against cell lysate and recombinant protein for WB. It has also been used for IF and ELISA.

## Images

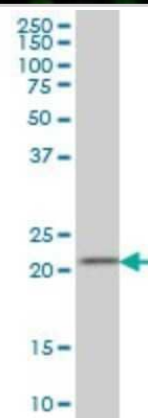
Western Blot: Dihydrofolate Reductase/DHFR Antibody (2B10) [H00001719-M01] - Folic acid treatment restores endothelial specific DHFR expression and activity in Ang II-infused apoE null mice. DHFR expression (A, n=?8-11) and activity (B, n=?5-7) measured from endothelial cells (ECs) and EC-denuded aortas isolated from apoE null mice after 4 weeks of infusion. Data show that DHFR expression and activity was restored in FA treated animals specifically in the endothelial cells. eNOS was stained to show that isolation/removal of ECs from the vessels was successful. \*p<0.05. Image collected and cropped by CiteAb from the following publication (<https://doi.org/10.1371/journal.pone.0088899>) licensed under a CC-BY license.



Immunocytochemistry/Immunofluorescence: Dihydrofolate Reductase/DHFR Antibody (2B10) [H00001719-M01] - Analysis of monoclonal antibody to DHFR on HeLa cell. Antibody concentration 10 ug/ml.



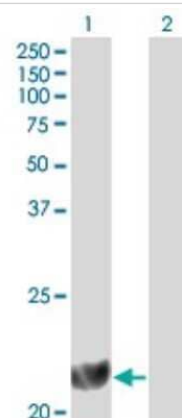
Western Blot: Dihydrofolate Reductase/DHFR Antibody (2B10) [H00001719-M01] - DHFR monoclonal antibody (M01), clone 2B10. Analysis of DHFR expression in HeLa.



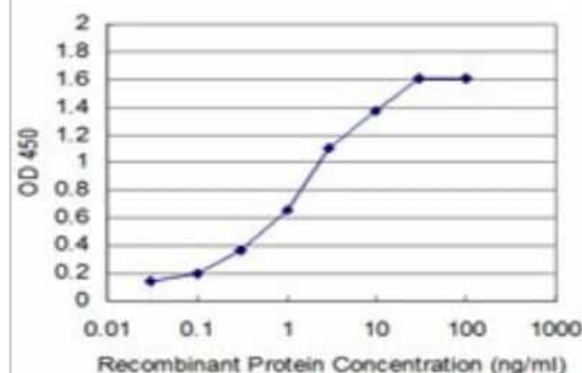
Western Blot: Dihydrofolate Reductase/DHFR Antibody (2B10) [H00001719-M01] - DHFR monoclonal antibody (M01), clone 2B10. Analysis of DHFR expression in PC-12.



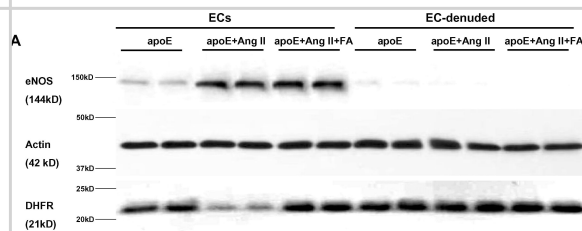
Western Blot: Dihydrofolate Reductase/DHFR Antibody (2B10) [H00001719-M01] - Analysis of DHFR expression in transfected 293T cell line by DHFR monoclonal antibody (M01), clone 2B10. Lane 1: DHFR transfected lysate (21.5 KDa). Lane 2: Non-transfected lysate.



Sandwich ELISA: Dihydrofolate Reductase/DHFR Antibody (2B10) [H00001719-M01] - Detection limit for recombinant GST tagged DHFR is approximately 0.1 ng/ml as a capture antibody.



Folic acid treatment restores endothelial specific DHFR expression and activity in Ang II-infused apoE null mice. DHFR expression (A, n=8–11) and activity (B, n=5–7) measured from endothelial cells (ECs) and EC-denuded aortas isolated from apoE null mice after 4 weeks of infusion. Data show that DHFR expression and activity was restored in FA treated animals specifically in the endothelial cells. eNOS was stained to show that isolation/removal of ECs from the vessels was successful. \*p<0.05.



## Publications

Li Q, Youn JY, Siu KL et al. Knockout of dihydrofolate reductase in mice induces hypertension and abdominal aortic aneurysm via mitochondrial dysfunction Redox Biology 2019-06-01 [PMID: 30954686] (Western Blot)

Huang K, Wang Y, Siu KL et al. Targeting feed-forward signaling of TGF beta/NOX4/DHFR/eNOS uncoupling/TGF beta axis with anti-TGF beta and folic acid attenuates formation of aortic aneurysms: Novel mechanisms and therapeutics Redox Biology [PMID: 33126053] (WB, Mouse)

Cai M, Zhang H, Hou L et al. Inhibiting homologous recombination decreases extrachromosomal amplification but has no effect on intrachromosomal amplification in methotrexate-resistant colon cancer cells. Int J Cancer 2018-08-02 [PMID: 30070702]

Steven S, Oelze M, Hanf A et al. The SGLT2 inhibitor empagliflozin improves the primary diabetic complications in ZDF rats. Redox Biol 2017-06-22 [PMID: 28667906]

Ionova IA, Vasquez-Vivar J, Whitsett J et al. Deficient BH4 production via de novo and salvage pathways regulates NO responses to cytokines in adult cardiac myocytes. Am J Physiol Heart Circ Physiol. 2008-10-03 [PMID: 18835915]

Vodenicharov MD, Laterreur N, Wellinger RJ. Telomere capping in non-dividing yeast cells requires Yku and Rap1. EMBO J. 2010-07-13 [PMID: 20628356]

Kossmann S, Hu H, Steven S et al. Inflammatory Monocytes Determine Endothelial Nitric Oxide Synthase Uncoupling and Nitro-oxidative Stress Induced by Angiotensin II. J Biol Chem 2014-08-20 [PMID: 25143378]

Oelze M, Kroller-Schon S, Welschof P et al. The sodium-glucose co-transporter 2 inhibitor empagliflozin improves diabetes-induced vascular dysfunction in the streptozotocin diabetes rat model by interfering with oxidative stress and glucotoxicity. PLoS One. 2014-11-17 [PMID: 25402275]

Jabs A, Oelze M, Mikhed Y et al. Effect of soluble guanylyl cyclase activator and stimulator therapy on nitroglycerin-induced nitrate tolerance in rats. Vascu Pharmacol 2015-04-11 [PMID: 25869522]

Bhabha G, Ekiert DC, Jennewein M et al. Divergent evolution of protein conformational dynamics in dihydrofolate reductase. Nat Struct Mol Biol. 2013-11-01 [PMID: 24077226]

Siu KL, Miao XN, Cai H. Recoupling of eNOS with Folic Acid Prevents Abdominal Aortic Aneurysm Formation in Angiotensin II-Infused Apolipoprotein E Null Mice. PLoS ONE 2014-02-21 [PMID: 24558445] (WB, Mouse)

Yoon SA, Choi JR, Kim JO et al. Influence of reduced folate carrier and dihydrofolate reductase genes on methotrexate-induced cytotoxicity. Cancer Res Treat;42(3):163-71. 2010-09-01 [PMID: 20948922]





### **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](http://www.novusbio.com)  
Technical Support: nb-technical@bio-techne.com  
Orders: nb-customerservice@bio-techne.com  
General: novus@novusbio.com

### **Products Related to H00001719-M01**

NB800-PC1	HeLa Whole Cell Lysate
HAF007	Goat anti-Mouse IgG Secondary Antibody [HRP]
NB720-B	Rabbit anti-Mouse IgG (H+L) Secondary Antibody [Biotin]
NBP1-96981-0.5mg	Mouse IgG2a Kappa Isotype Control (M2AK)

### **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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