

Product Datasheet

Peroxiredoxin 2 Antibody (4E10-2D2) - Azide and BSA Free H00007001-M01

Unit Size: 0.1 mg

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

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H00007001-M01

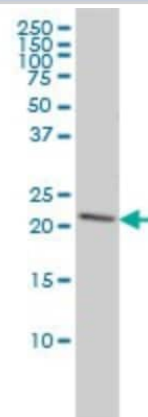
Peroxiredoxin 2 Antibody (4E10-2D2) - Azide and BSA Free

Product Information	
Unit Size	0.1 mg
Concentration	Concentrations vary lot to lot. See vial label for concentration. If unlisted please contact technical services.
Storage	Aliquot and store at -20C or -80C. Avoid freeze-thaw cycles.
Clonality	Monoclonal
Clone	4E10-2D2
Preservative	No Preservative
Isotype	IgG1 Kappa
Purity	IgG purified
Buffer	In 1x PBS, pH 7.4
Product Description	
Description	Quality control test: Antibody Reactive Against Recombinant Protein.
Host	Mouse
Gene ID	7001
Gene Symbol	PRDX2
Species	Human
Specificity/Sensitivity	PRDX2 - peroxiredoxin 2
Immunogen	PRDX2 (AAH00452, 1 a.a. ~ 198 a.a) full-length recombinant protein with GST tag. MW of the GST tag alone is 26 KDa. MASGNARIGKPAPDFKATAVVDGAFKEVKLSYKGYVVLFFYPLDFTFVCPTE IIAFSNRAEDFRKLGCEVLGVSVDSQFTHLAWINTPRKEGGLGPLNIPLLADVTR RLSEDYGVLTDEGIAYRGLFIIDGKGVLQRQITVNDLPVGRSVDEALRLVQAFQY TDEHGEVCPAGWKPGSDTIKPNVDDSKYFSKHN
Notes	This product is produced by and distributed for Abnova, a company based in Taiwan.
Product Application Details	
Applications	Western Blot, ELISA, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Paraffin, Knockdown Validated
Recommended Dilutions	Western Blot, ELISA, Immunohistochemistry, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry-Paraffin, Knockdown Validated
Application Notes	Antibody reactivity against cell lysate and recombinant protein for WB. It has also been used for IF, IHC-P and ELISA.

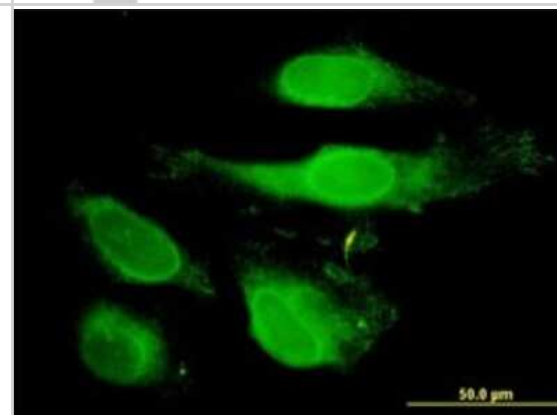


Images

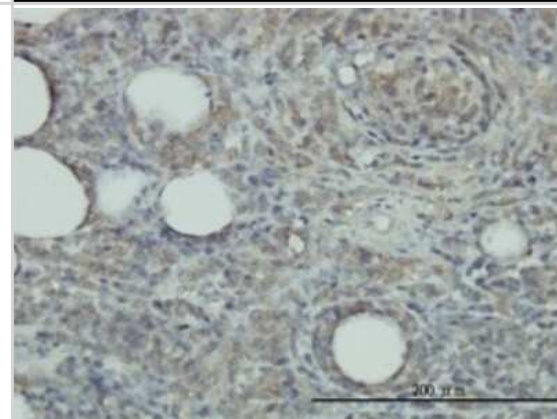
Western Blot: Peroxiredoxin 2 Antibody (4E10-2D2) [H00007001-M01] - PRDX2 monoclonal antibody (M01), clone 4E10-2D2 Analysis of PRDX2 expression in Hela.



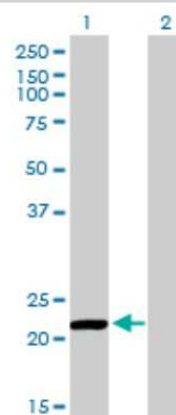
Immunocytochemistry/Immunofluorescence: Peroxiredoxin 2 Antibody (4E10-2D2) [H00007001-M01] - Analysis of monoclonal antibody to PRDX2 on HeLa cell. Antibody concentration 10 ug/ml.



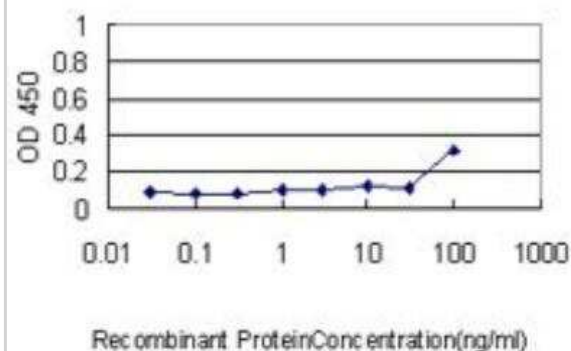
Immunohistochemistry-Paraffin: Peroxiredoxin 2 Antibody (4E10-2D2) [H00007001-M01] - Analysis of monoclonal antibody to PRDX2 on formalin-fixed paraffin-embedded human malignant lymphoma, diffuse large B tissue. Antibody concentration 1 ug/ml.



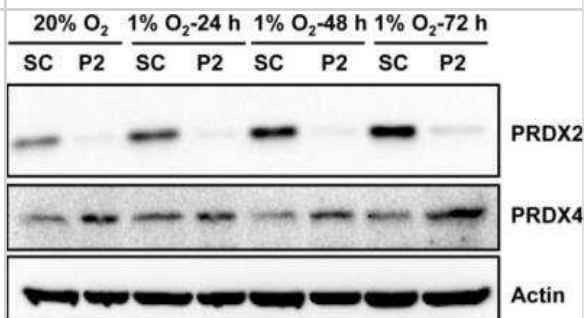
Western Blot: Peroxiredoxin 2 Antibody (4E10-2D2) [H00007001-M01] - Analysis of PRDX2 expression in transfected 293T cell line by PRDX2 monoclonal antibody (M01), clone 4E10-2D2. Lane 1: PRDX2 transfected lysate (21.9 KDa). Lane 2: Non-transfected lysate.



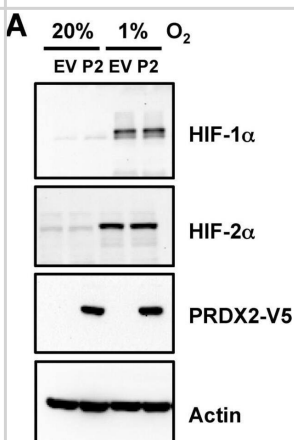
ELISA: Peroxiredoxin 2 Antibody (4E1.0-2D2) [H00007001-M01] - Peroxiredoxin 2 Antibody (4E10-2D2) [H00007001-M01] - Detection limit for recombinant GST tagged PRDX2 is approximately 1ng/ml as a capture antibody.



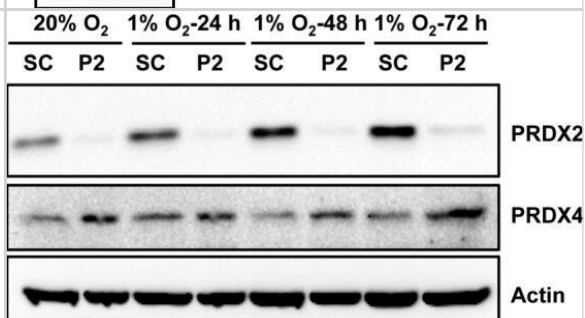
Western Blot: Peroxiredoxin 2 Antibody (4E10-2D2) [H00007001-M01] - PRDX2 knockdown increases PRDX4 protein levels in HeLa cells. HeLa subclones were exposed to 20% or 1% O₂ for indicated time. Each WCL was subject to immunoblot assays with the indicated antibodies (PRDX2 H00007001-M01 and PRDX4 NBP1-31435). Image collected and cropped by CiteAb from the following publication ([oncotarget.com/abstract/7142](https://www.oncotarget.com/abstract/7142)), licensed under a CC-BY license.



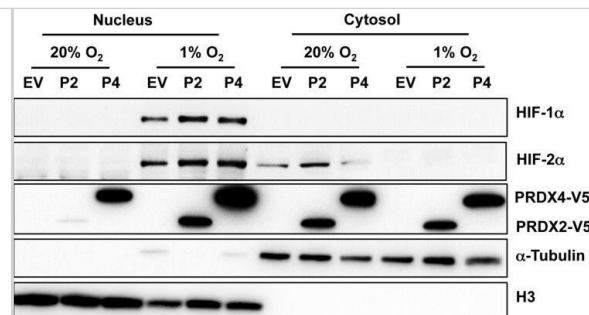
Western Blot: Peroxiredoxin 2 Antibody (4E10-2D2) [H00007001-M01] - Expression of PRDX2 or PRDX4 does not affect HIF-1α or HIF-2α protein levels. A. & B. HeLa cells were transfected with EV or vector encoding PRDX2-V5 (A, P2) or PRDX4-V5 (B, P4), & exposed to 20% or 1% O₂ for 24 h. WCL was subject to immunoblot assays with antibody against HIF-1α, HIF-2α, V5, or actin. C. HeLa-shSC (sc) & HeLa-shPRDX (2+4) (2+4) cells were exposed to 20% or 1% O₂ for 24 h in the presence of doxycycline. WCL was subject to immunoblot assays with antibodies against HIF-1α, HIF-2α, PRDX2, PRDX4, & actin. Image collected & cropped by CiteAb from the following publication (<https://www.oncotarget.com/lookup/doi/10.18632/oncotarget.7142>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



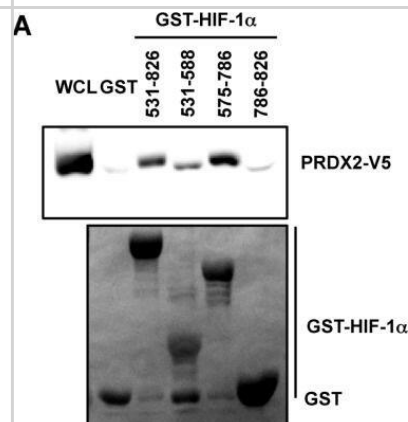
Western Blot: Peroxiredoxin 2 Antibody (4E10-2D2) [H00007001-M01] - PRDX2 knockdown increases PRDX4 protein levels in HeLa cells. HeLa subclones were exposed to 20% or 1% O₂ for indicated time. Each WCL was subject to immunoblot assays with the indicated antibodies. SC, scrambled control shRNA. P2, PRDX2 shRNA. Image collected & cropped by CiteAb from the following publication (<https://www.oncotarget.com/lookup/doi/10.18632/oncotarget.7142>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



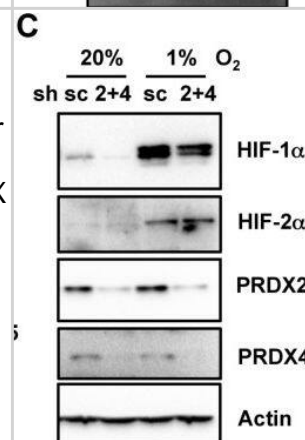
Western Blot: Peroxiredoxin 2 Antibody (4E10-2D2) [H00007001-M01] - Hypoxia induces the nuclear translocation of PRDX2 & PRDX4. HeLa cells were transfected with vector encoding PRDX2-V5 (P2) or PRDX4-V5 (P4), or empty vector (EV), & exposed to 20% or 1% O₂ for 48 h. Nuclear & cytosolic fractions were isolated & subject to immunoblot assays with antibodies against HIF-1 α , HIF-2 α , V5, α -tubulin, & histone H3. Image collected & cropped by CiteAb from the following publication (<https://www.oncotarget.com/lookup/doi/10.18632/oncotarget.7142>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



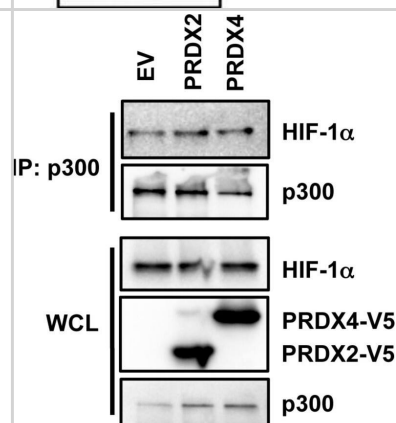
Western Blot: Peroxiredoxin 2 Antibody (4E10-2D2) [H00007001-M01] - Mapping the PRDX2 & PRDX4 binding domains of HIF-1 α . A. & B. HeLa cells were transfected with PRDX2-V5 (A) or PRDX4-V5 (B) vector & WCL was incubated with purified GST or GST-HIF-1 α fusion protein in the presence of glutathione-Sepharose beads, followed by immunoblot assays with anti-V5 antibody (upper panels) or Ponceau S staining (lower panels). Image collected & cropped by CiteAb from the following publication (<https://www.oncotarget.com/lookup/doi/10.18632/oncotarget.7142>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



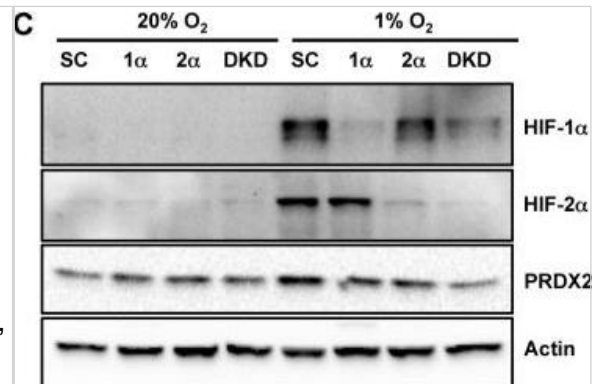
Western Blot: Peroxiredoxin 2 Antibody (4E10-2D2) [H00007001-M01] - Expression of PRDX2 or PRDX4 does not affect HIF-1 α or HIF-2 α protein levels. A. & B. HeLa cells were transfected with EV or vector encoding PRDX2-V5 (A, P2) or PRDX4-V5 (B, P4), & exposed to 20% or 1% O₂ for 24 h. WCL was subject to immunoblot assays with antibody against HIF-1 α , HIF-2 α , V5, or actin. C. HeLa-shSC (sc) & HeLa-shPRDX (2+4) (2+4) cells were exposed to 20% or 1% O₂ for 24 h in the presence of doxycycline. WCL was subject to immunoblot assays with antibodies against HIF-1 α , HIF-2 α , PRDX2, PRDX4, & actin. Image collected & cropped by CiteAb from the following publication (<https://www.oncotarget.com/lookup/doi/10.18632/oncotarget.7142>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



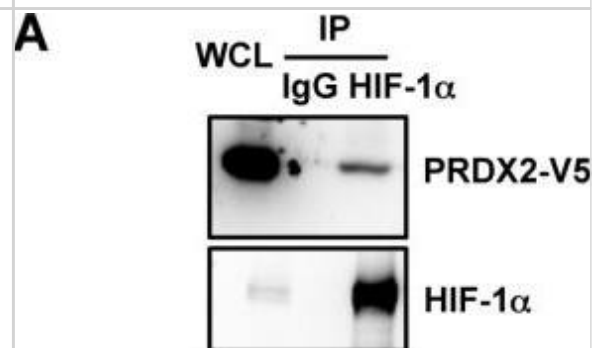
Western Blot: Peroxiredoxin 2 Antibody (4E10-2D2) [H00007001-M01] - Effect of PRDX2 & PRDX4 on HIF-1 α -p300 interaction. HeLa cells were transfected with empty vector (EV) or vector encoding PRDX2-V5 or PRDX4-V5, & exposed to 1% O₂ for 24 h. WCL was subject to IP with anti-p300 antibody, followed by immunoblot assays using antibodies against HIF-1 α , V5, & p300. Image collected & cropped by CiteAb from the following publication (<https://www.oncotarget.com/lookup/doi/10.18632/oncotarget.7142>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



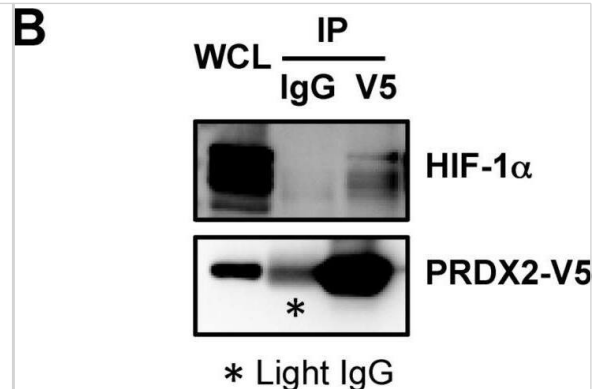
Western Blot: Peroxiredoxin 2 Antibody (4E10-2D2) [H00007001-M01] - PRDX2 expression is regulated by HIF-1 & HIF-2A. HeLa cells were exposed to 20% or 1% O₂ for 24 h. RT-qPCR assays were performed using primers specific for the indicated mRNAs. Data are shown as mean \pm SEM, n = 3. ***p < 0.001 versus 20% O₂. B. HeLa cells were exposed to 20% or 1% O₂ for the indicated time. WCLs were subject to immunoblot assays with antibodies against PRDX2, HIF-1 α , HIF-2 α , & actin. The PRDX2 & actin bands were quantified by densitometry & normalized to 0 h (20% O₂). Normalized data are shown as mean \pm SEM, n = 3. *p < 0.05, ***p < 0.001 versus 20% O₂. C. HeLa-shSC (SC), HeLa-shHIF-1 α (1 α), HeLa-shHIF-2 α (2 α), & HeLa-sh1 α +2 α (DKD) cells were exposed to 20% or 1% O₂ for 72 h. WCLs were subject to immunoblot assays with antibodies against PRDX2, HIF-1 α , HIF-2 α , & actin. Image collected & cropped by CiteAb from the following publication (<https://www.oncotarget.com/lookup/doi/10.18632/oncotarget.7142>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



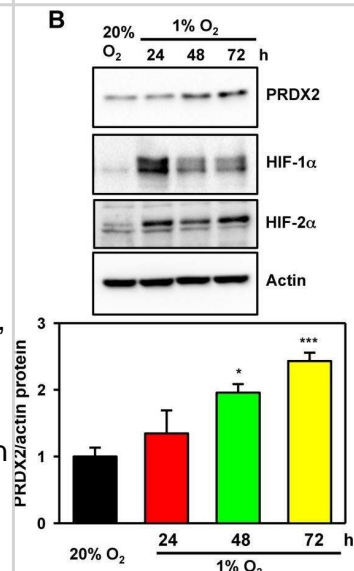
Western Blot: Peroxiredoxin 2 Antibody (4E10-2D2) [H00007001-M01] - PRDX proteins bind to HIF-1 α & HIF-2 α . HeLa cells were transfected with an expression vector encoding V5-epitope-tagged PRDX2 (PRDX2-V5) & exposed to 1% O₂ for 24 h. Whole cell lysate (WCL) was subject to immunoprecipitation (IP) using anti-HIF-1 α antibody or control IgG, followed by immunoblot assays with antibody against V5 epitope or HIF-1 α . B. HeLa cells were transfected with PRDX2-V5 vector & exposed to 1% O₂ for 24 h. The WCL was subject to IP using anti-V5 antibody or control IgG, followed by immunoblot assays with antibody against V5 or HIF-1 α . Light IgG: immunoglobulin light chain from the secondary antibody. C. HeLa cells were transfected with vector encoding a V5-tagged PRDX family member & exposed to 1% O₂ for 24 h. WCL was subject to IP using anti-HIF-1 α antibody, followed by immunoblot assays with antibody against V5 or HIF-1 α . D. HeLa cells were transfected with empty vector (EV) or vector encoding a V5-tagged PRDX family member & exposed to 1% O₂ for 24 h. WCL was subject to IP using anti-HIF-2 α antibody, followed by immunoblot assays with antibody against V5 or HIF-2 α . Image collected & cropped by CiteAb from the following publication (<https://www.oncotarget.com/lookup/doi/10.18632/oncotarget.7142>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Western Blot: Peroxiredoxin 2 Antibody (4E10-2D2) [H00007001-M01] - PRDX proteins bind to HIF-1 α & HIF-2 α . HeLa cells were transfected with an expression vector encoding V5-epitope-tagged PRDX2 (PRDX2-V5) & exposed to 1% O₂ for 24 h. Whole cell lysate (WCL) was subject to immunoprecipitation (IP) using anti-HIF-1 α antibody or control IgG, followed by immunoblot assays with antibody against V5 epitope or HIF-1 α . B. HeLa cells were transfected with PRDX2-V5 vector & exposed to 1% O₂ for 24 h. The WCL was subject to IP using anti-V5 antibody or control IgG, followed by immunoblot assays with antibody against V5 or HIF-1 α . Light IgG: immunoglobulin light chain from the secondary antibody. C. HeLa cells were transfected with vector encoding a V5-tagged PRDX family member & exposed to 1% O₂ for 24 h. WCL was subject to IP using anti-HIF-1 α antibody, followed by immunoblot assays with antibody against V5 or HIF-1 α . D. HeLa cells were transfected with empty vector (EV) or vector encoding a V5-tagged PRDX family member & exposed to 1% O₂ for 24 h. WCL was subject to IP using anti-HIF-2 α antibody, followed by immunoblot assays with antibody against V5 or HIF-2 α . Image collected & cropped by CiteAb from the following publication (<https://www.oncotarget.com/lookup/doi/10.18632/oncotarget.7142>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Western Blot: Peroxiredoxin 2 Antibody (4E10-2D2) [H00007001-M01] - PRDX2 expression is regulated by HIF-1 & HIF-2A. HeLa cells were exposed to 20% or 1% O₂ for 24 h. RT-qPCR assays were performed using primers specific for the indicated mRNAs. Data are shown as mean \pm SEM, n = 3. ***p < 0.001 versus 20% O₂. B. HeLa cells were exposed to 20% or 1% O₂ for the indicated time. WCLs were subject to immunoblot assays with antibodies against PRDX2, HIF-1 α , HIF-2 α , & actin. The PRDX2 & actin bands were quantified by densitometry & normalized to 0 h (20% O₂). Normalized data are shown as mean \pm SEM, n = 3. *p < 0.05, ***p < 0.001 versus 20% O₂. C. HeLa-shSC (SC), HeLa-shHIF-1 α (1 α), HeLa-shHIF-2 α (2 α), & HeLa-sh1 α +2 α (DKD) cells were exposed to 20% or 1% O₂ for 72 h. WCLs were subject to immunoblot assays with antibodies against PRDX2, HIF-1 α , HIF-2 α , & actin. Image collected & cropped by CiteAb from the following publication (<https://www.oncotarget.com/lookup/doi/10.18632/oncotarget.7142>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Publications

Halbert D, Domenyuk V, Spetzler D et al. Aptamers and uses thereof United States Patent Application US 9958448 B2 2018-01-01

Romanello KS, Teixeira KKL, Silva JPMO et al. Global analysis of erythroid cells redox status reveals the involvement of Prdx1 and Prdx2 in the severity of beta thalassemia. PLoS One 2018-12-06 [PMID: 30521599]

Araki K, Kusano H, Sasaki N et al. Redox Sensitivities of Global Cellular Cysteine Residues under Reductive and Oxidative Stress. J Proteome Res 2016-08-05 [PMID: 27350002]

Luo W, Chen I, Chen Y et al. PRDX2 and PRDX4 are negative regulators of hypoxia-inducible factors under conditions of prolonged hypoxia Oncotarget. 2016-02-09 [PMID: 26837221] (WB)

Details:

The mechanism for feedback inhibition of hypoxia-inducible factors during prolonged hypoxia is clarified through studying the interaction of PRDX2 and PRDX4 with HIF-1 alpha and HIF-2 alpha.

Gemoll T, Roblick UJ, Szymczak S et al. HDAC2 and TXNL1 distinguish aneuploid from diploid colorectal cancers. Cell Mol Life Sci 2011-02-03 [PMID: 21290163]

Desmetz C, Bascoul-Mollevis C, Rochaix P et al. Identification of a New Panel of Serum Autoantibodies Associated with the Presence of In situ Carcinoma of the Breast in Younger Women. Clin Cancer Res 2009-07-15 [PMID: 19584157]





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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NBP2-52150-0.1mg	Recombinant Rat Peroxiredoxin 2 His Protein

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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