Datasheet: MCA2880P

Description:	MOUSE ANTI HUMAN NQO1:HRP
Specificity:	NQO1
Other names:	NAD(P)H DEHYDROGENASE [QUINONE] 1
Format:	HRP
Product Type:	Monoclonal Antibody
Clone:	A180
Isotype:	IgG1
Quantity:	0.1 mg

Product Details

Applications

This product has been reported to work in the following applications. This information is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information. For general protocol recommendations, please visit www.bio-rad-antibodies.com/protocols.

	Yes	No	Not Determined	Suggested Dilution
Immunohistology - Paraffin (1)	▪			
Western Blotting	▪			1/100 - 1/250

Where this product has not been tested for use in a particular technique this does not necessarily exclude its use in such procedures. Suggested working dilutions are given as a guide only. It is recommended that the user titrates the product for use in their own system using appropriate negative/positive controls.

(1)**This product requires antigen retrieval using heat treatment prior to staining of paraffin sections.Sodium citrate buffer pH 6.0 is recommended for this purpose.**

Target Species	Human
Species Cross Reactivity	Does not react with:Mouse Reacts weakly with:Rat **N.B.** Antibody reactivity and working conditions may vary between species.
Product Form	Purified IgG conjugated to Horseradish Peroxidase (HRP) - liquid
Preparation	Purified IgG prepared by affinity chromatography on Protein G from tissue culture supernatant
Buffer Solution	Phosphate buffered saline
Preservative Stabilisers	0.01% Thiomersal
Approx. Protein Concentrations	IgG concentration 1.0mg/ml
Immunogen	Purified recombinant human NQO1

External Database Links	**UniProt:** P15559 Related reagents **Entrez Gene:** 1728 NQO1 Related reagents
Synonyms	DIA4, NMOR1
Specificity	**Mouse anti human NQO1 antibody, clone A180** recognizes human NQO1 (NAD(P)H:quinone oxidoreductase 1), a ~31 kDa cytosolic flavoenzyme and member of the NAD(P)H dehydrogenase (quinone) family, involved in detoxification. NQO1 catalyzes the two-electron reduction of quinones to hydroquinones. NQO1 is expressed in a wide range of tissues and is overexpressed in many human tumors including lung, brain, liver, colon and breast. The ability of NQO1 to bioactivate anti-tumor quinones including mitomycin C and diaziquone, has become a focus area for chemotherapeutic studies. Mutations in the NQO1 gene are associated with an increased risk of certain cancers, and an increased risk of leukaemia has been associated with diminished NQO1 activity and the NQO1 *2 allele (Nerbert *et al.* 2002). Mouse anti human NQO1 antibody, clone A180 recognizes the product of the wild-type allele NQO1*1 but does not recognize the product of the mutant NQO1*2 allele (Sato *et al.* 2010 and Fegerholm *et al.* 2008). Mouse anti human NQO1 antibody, clone A180 detects endogenous levels of total NQO1, and does not cross-react with NQO2 (Siegal *et al.* 1998). Mouse anti human NQO1 antibody, clone A180 is reported as suitable for use in immunofluorescence studies (Siegal *et al.* 2012).
Histology Positive Control Tissue	Human lung
Western Blotting	MCA2880P detects a band of approximately 31kDa in HeLa and HepG2 cell lysates.
References	1. Siegel, D. *et al.* (1998) Immunohistochemical detection of NAD(P)H:quinone oxidoreductase in human lung and lung tumors. Clin Cancer Res. 4 (9): 2065-70. 2. Anwar, A. *et al.* (2002) Interaction of the molecular chaperone Hsp70 with human NAD(P)H:quinone oxidoreductase 1. J Biol Chem. 277 (16): 14060-7. 3. Anwar, A. *et al.* (2003) Interaction of human NAD(P)H:quinone oxidoreductase 1 (NQO1) with the tumor suppressor protein p53 in cells and cell-free systems. J Biol Chem. 278: 10368-73. 4. Moran, J.L. *et al.* (1999) A potential mechanism underlying the increased susceptibility of individuals with a polymorphism in NAD(P)H:quinone oxidoreductase 1 (NQO1) to benzene toxicity. Proc Natl Acad Sci U S A. 96: 8150-5. 5. Zhou, H. *et al.* (2010) NAD(P)H:quinone oxidoreductase 1-compromised human bone marrow endothelial cells exhibit decreased adhesion molecule expression and CD34+ hematopoietic cell adhesion. J Pharmacol Exp Ther. 334: 260-8. 6. Kansanen, E. *et al.* (2009) Nrf2-dependent and -independent responses to nitro-fatty acids in human endothelial cells: identification of heat shock response as the major pathway activated by nitro-oleic acid. J Biol Chem. 284: 33233-41.
Storage	Store at +4°C or at -20°C if preferred. Storage in frost-free freezers is not recommended. This product should be stored undiluted. Avoid repeated freezing and thawing as this may denature

	the antibody. Should this product contain a precipitate we recommend microcentrifugation before use.
Shelf Life	18 months from date of despatch.
Health And Safety Information	Material Safety Datasheet documentation #10094 available at: 10094: https://www.bio-rad-antibodies.com/uploads/MSDS/10094.pdf
Regulatory	For research purposes only

Related Products

Recommended Useful Reagents

AbGUARD® HRP STABILIZER PLUS (BUF052A)
AbGUARD® HRP STABILIZER PLUS (BUF052B)
AbGUARD® HRP STABILIZER PLUS (BUF052C)

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