

Datasheet: MCA2880GA

Description:	MOUSE ANTI HUMAN NQO1
Specificity:	NQO1
Other names:	NAD(P)H DEHYDROGENASE [QUINONE] 1
Format:	Purified
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
Flow Cytometry			▪	
Immunohistology - Frozen			▪	
Immunohistology - Paraffin (1)	▪			
ELISA			▪	
Immunoprecipitation	▪			
Western Blotting	▪			1/100 - 1/1000

The PrecisionAb label is reserved for antibodies that meet the defined performance criteria within Bio-Rad's ongoing antibody validation programme. Click [here](#) to learn how we validate our PrecisionAb range. Where this antibody 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 antibody 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. Cross

reactivity is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information.

Product Form	Purified IgG - liquid
Preparation	Purified IgG prepared by affinity chromatography on Protein A from tissue culture supernatant
Buffer Solution	Phosphate buffered saline
Preservative Stabilisers	0.09% Sodium Azide (NaN ₃)
Carrier Free	Yes
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
RRID	AB_2154355
Specificity	<p>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.</p> <p>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 investigations. 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).</p> <p>Mouse anti human NQO1 antibody, clone A180 detects endogenous levels of total NQO1, and does not cross-react with NQO2 (Siegal et al. 1998).</p>

Mouse anti human NQO1 antibody, clone A180 is reported as suitable for use in immunofluorescence ([Siegal et al. 2012](#)).

Histology Positive Control Tissue

Human lung

Western Blotting

MCA2880GA 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

This product is shipped at ambient temperature. It is recommended to aliquot and store at -20°C on receipt. When thawed, aliquot the sample as needed. Keep aliquots at 2-8°C for short term use (up to 4 weeks) and store the remaining aliquots at -20°C.

Avoid repeated freezing and thawing as this may denature the antibody. Storage in frost-free freezers is not recommended.

Guarantee

12 months from date of despatch

Acknowledgements

PrecisionAb is a trademark of Bio-Rad Laboratories

Health And Safety Information

Material Safety Datasheet documentation #10040 available at: 10040: <https://www.bio-rad-antibodies.com/uploads/MSDS/10040.pdf>

Regulatory

For research purposes only

Related Products

Recommended Secondary Antibodies

- | | |
|-----------------------------------|-----------------------------|
| Goat Anti Mouse IgG (STAR77...) | HRP |
| Rabbit Anti Mouse IgG (STAR12...) | RPE |
| Rabbit Anti Mouse IgG (STAR8...) | DyLight®800 |

Goat Anti Mouse IgG (STAR70...) [FITC](#)
Goat Anti Mouse IgG IgA IgM (STAR87...) [Alk. Phos.](#), [HRP](#)
Goat Anti Mouse IgG (Fc) (STAR120...) [FITC](#), [HRP](#)
Rabbit Anti Mouse IgG (STAR9...) [FITC](#)
Goat Anti Mouse IgG (H/L) (STAR117...) [Alk. Phos.](#), [DyLight®488](#), [DyLight®550](#),
[DyLight®650](#), [DyLight®680](#), [DyLight®800](#),
[FITC](#), [HRP](#)
Goat Anti Mouse IgG (STAR76...) [RPE](#)
Rabbit Anti Mouse IgG (STAR13...) [HRP](#)

Recommended Negative Controls

[MOUSE IgG1 NEGATIVE CONTROL \(MCA928\)](#)

North & South America	Tel: +1 800 265 7376 Fax: +1 919 878 3751 Email: antibody_sales_us@bio-rad.com	Worldwide	Tel: +44 (0)1865 852 700 Fax: +44 (0)1865 852 739 Email: antibody_sales_uk@bio-rad.com	Europe	Tel: +49 (0) 89 8090 95 21 Fax: +49 (0) 89 8090 95 50 Email: antibody_sales_de@bio-rad.com
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To find a batch/lot specific datasheet for this product, please use our online search tool at: bio-rad-antibodies.com/datasheets

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