

## Datasheet: MCA1703

<b>Description:</b>	MOUSE ANTI p53 (aa20-25)
<b>Specificity:</b>	p53 (aa20-25)
<b>Format:</b>	Purified
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	DO-7
<b>Isotype:</b>	IgG2b
<b>Quantity:</b>	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](http://www.bio-rad-antibodies.com/protocols).

	Yes	No	Not Determined	Suggested Dilution
Flow Cytometry (1)	▪			1/50 - 1/100
Immunohistology - Frozen	▪			
Immunohistology - Paraffin (2)	▪			1/1000
ELISA			▪	
Immunoprecipitation	▪			
Western Blotting	▪			1/1000

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) **Membrane permeabilization is required for this application. The use of Leucoperm (Product Code [BUF09](#)) is recommended for this purpose.**

(2) **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.**

<b>Target Species</b>	Human
<b>Species Cross Reactivity</b>	<p>Reacts with: Bovine</p> <p>Does not react with: Mouse, Rat</p> <p><b>N.B.</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.</p>

<b>Product Form</b>	Purified IgG - liquid
<b>Preparation</b>	Purified IgG prepared by affinity chromatography on Protein A from tissue culture supernatant
<b>Buffer Solution</b>	Phosphate buffered saline
<b>Preservative Stabilisers</b>	0.09% sodium azide (NaN <sub>3</sub> )
<b>Carrier Free</b>	Yes
<b>Approx. Protein Concentrations</b>	IgG concentration 1.0 mg/ml
<b>Immunogen</b>	Recombinant human p53.
<b>External Database Links</b>	<p><b>UniProt:</b>  <a href="#">P04637</a>    <a href="#">Related reagents</a></p> <p><b>Entrez Gene:</b>  <a href="#">7157</a>    TP53    <a href="#">Related reagents</a></p>
<b>Synonyms</b>	P53
<b>RRID</b>	AB_322635
<b>Fusion Partners</b>	Spleen cells from immunized BALB/c mice were fused with cells of the mouse X63Ag8.653 myeloma cell line.
<b>Specificity</b>	<p><b>Mouse anti p53 antibody, clone DO-7</b> recognizes the human 53 kDa p53 tumour suppressor protein, also known as Cellular tumor antigen p53 or Antigen NY-CO-13, encoded by the TP53 gene. p53 is a 393 amino acid protein with an N-terminal transactivation domain, followed by a proline-rich region and a DNA binding domain in the central core region. The C-terminal region contains a tetramerization domain and a terminal regulatory domain (<a href="#">Joerger et al. 2010</a>).</p> <p>p53 is intimately involved in a number of signaling pathways controlling cell division, cycling and apoptosis (<a href="#">Haupt et al. 2003</a>) and is thus a potent cancer suppressor. In normal cells the level of p53 expression is low but can be induced by DNA damage or other stress signals (<a href="#">Takagi et al. 2005</a>). Activation of p53 leads to growth arrest through its interaction with p21, GADD45 and 14-3-3σ, DNA repair and potentially apoptosis through interaction with Bax, Apaf-1, PUMA and NoxA (<a href="#">Thakur et al. 2010</a>). p53 is critically regulated by Mdm2 which can trigger p53 degradation by a ubiquitin dependent system (<a href="#">Moll and Petrenko 2003</a>)</p> <p>Mouse anti p53 antibody, clone DO-7 recognizes an epitope at the N-terminal end of p53 between amino acids 20-25, binding to both wild type and mutant forms. Clone DO-7 is</p>

not expected to recognize the multiple [isoforms](#) lacking the N-terminal region.

<b>Flow Cytometry</b>	Use 10µl of the suggested working dilution to label 1x10 <sup>6</sup> cells in 100µl
<b>Histology Positive Control Tissue</b>	Normal human colon or breast carcinoma
<b>References</b>	<ol style="list-style-type: none"><li>1. Vojtěšek, B. <i>et al.</i> (1992) An immunochemical analysis of the human nuclear phosphoprotein p53. New monoclonal antibodies and epitope mapping using recombinant p53. <a href="#">J Immunol Methods. 151 (1-2): 237-44.</a></li><li>2. Xinarianos, G. <i>et al.</i> (2002) p53 status correlates with the differential expression of the DNA mismatch repair protein MSH2 in non-small cell lung carcinoma. <a href="#">Int J Cancer. 101: 248-52.</a></li><li>3. Iannone, F. <i>et al.</i> (2005) Increased Bcl-2/p53 ratio in human osteoarthritic cartilage: a possible role in regulation of chondrocyte metabolism. <a href="#">Ann Rheum Dis. 64: 217-21.</a></li><li>4. Lin, L.C. <i>et al.</i> (2006) p53 and p27 as predictors of clinical outcome for rectal-cancer patients receiving neoadjuvant therapy. <a href="#">Surg Oncol. 15: 211-6.</a></li><li>5. Huang, H.Y. <i>et al.</i> (2008) Immunohistochemical and biogenetic features of diffuse-type tenosynovial giant cell tumors: the potential roles of cyclin A, P53, and deletion of 15q in sarcomatous transformation. <a href="#">Clin Cancer Res. 14: 6023-32.</a></li></ol>
<b>Storage</b>	<p>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.</p> <p>Avoid repeated freezing and thawing as this may denature the antibody. Storage in frost-free freezers is not recommended.</p>
<b>Guarantee</b>	12 months from date of despatch
<b>Health And Safety Information</b>	Material Safety Datasheet documentation #10040 available at: <a href="https://www.bio-rad-antibodies.com/SDS/MCA1703">https://www.bio-rad-antibodies.com/SDS/MCA1703</a> 10040
<b>Regulatory</b>	For research purposes only

## Related Products

### Recommended Secondary Antibodies

Rabbit Anti Mouse IgG (STAR12...)	<a href="#">RPE</a>
Goat Anti Mouse IgG IgA IgM (STAR87...)	<a href="#">HRP</a>
Goat Anti Mouse IgG (STAR76...)	<a href="#">RPE</a>
Goat Anti Mouse IgG (STAR70...)	<a href="#">FITC</a>
Rabbit Anti Mouse IgG (STAR13...)	<a href="#">HRP</a>
Goat Anti Mouse IgG (Fc) (STAR120...)	<a href="#">FITC</a> , <a href="#">HRP</a>
Rabbit Anti Mouse IgG (STAR9...)	<a href="#">FITC</a>
Goat Anti Mouse IgG (STAR77...)	<a href="#">HRP</a>

Goat Anti Mouse IgG (H/L) (STAR117...) [Alk. Phos.](#), [DyLight®488](#), [DyLight®550](#),  
[DyLight®650](#), [DyLight®680](#), [DyLight®800](#),  
[FITC](#), [HRP](#)

## Recommended Negative Controls

[MOUSE IgG2b NEGATIVE CONTROL \(MCA691\)](#)

<b>North &amp; South America</b>	Tel: +1 800 265 7376 Fax: +1 919 878 3751 Email: <a href="mailto:antibody_sales_us@bio-rad.com">antibody_sales_us@bio-rad.com</a>	<b>Worldwide</b>	Tel: +44 (0)1865 852 700 Fax: +44 (0)1865 852 739 Email: <a href="mailto:antibody_sales_uk@bio-rad.com">antibody_sales_uk@bio-rad.com</a>	<b>Europe</b>	Tel: +49 (0) 89 8090 95 21 Fax: +49 (0) 89 8090 95 50 Email: <a href="mailto:antibody_sales_de@bio-rad.com">antibody_sales_de@bio-rad.com</a>
----------------------------------	---	------------------	---	---------------	---

To find a batch/lot specific datasheet for this product, please use our online search tool at: [bio-rad-antibodies.com/datasheets](https://bio-rad-antibodies.com/datasheets)

'M437869:250319'

Printed on 19 Mar 2025

---

© 2025 Bio-Rad Laboratories Inc | [Legal](#) | [Imprint](#)