

## Datasheet: MCA1703

**BATCH NUMBER 161741**

<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 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)Membrane permeabilization is required for this application. Bio-Rad recommend the use of Leucoperm™ (Product Code [BUF09](#)) 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</p>

further information.

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<b>Product Form</b>	Purified IgG - liquid
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<b>Preparation</b>	Purified IgG prepared by affinity chromatography on Protein A
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<b>Buffer Solution</b>	Phosphate buffered saline
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<b>Preservative Stabilisers</b>	0.09% Sodium Azide
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<b>Carrier Free</b>	Yes
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<b>Approx. Protein Concentrations</b>	IgG concentration 1.0 mg/ml
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<b>Immunogen</b>	Recombinant human p53.
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<b>External Database Links</b>	<b>UniProt:</b> <a href="#">P04637</a> <a href="#">Related reagents</a>  <b>Entrez Gene:</b> <a href="#">7157</a> TP53 <a href="#">Related reagents</a>
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<b>Synonyms</b>	P53
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<b>RRID</b>	AB_322635
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<b>Fusion Partners</b>	Spleen cells from immunised BALB/c mice were fused with cells of the mouse X63Ag8.653 myeloma cell line.
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<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 14-3-3<math>\sigma</math>, 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</p>
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between amino acids 20-25, binding to both wild type and mutant forms. Clone DO-7 is not expected to recognize the multiple [isoforms](#) lacking the N-terminal region.

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**Flow Cytometry** Use 10ul of the suggested working dilution to label  $1 \times 10^6$  cells in 100ul.

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**Histology Positive Control Tissue** Colon or breast carcinoma

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**References**

1. Vojtěšek, B. *et al.* (1992) An immunochemical analysis of the human nuclear phosphoprotein p53. New monoclonal antibodies and epitope mapping using recombinant p53. [J Immunol Methods. 151 \(1-2\): 237-44.](#)
2. Xinarianos, G. *et al.* (2002) p53 status correlates with the differential expression of the DNA mismatch repair protein MSH2 in non-small cell lung carcinoma. [Int J Cancer. 101: 248-52.](#)
3. Huang, H.Y. *et al.* (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. [Clin Cancer Res. 14: 6023-32.](#)
4. Iannone, F. *et al.* (2005) Increased Bcl-2/p53 ratio in human osteoarthritic cartilage: a possible role in regulation of chondrocyte metabolism. [Ann Rheum Dis. 64: 217-21.](#)
5. Lin, L.C. *et al.* (2006) p53 and p27 as predictors of clinical outcome for rectal-cancer patients receiving neoadjuvant therapy. [Surg Oncol. 15: 211-6.](#)

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

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

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**Guarantee** 12 months from date of despatch

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**Health And Safety Information** Material Safety Datasheet documentation #10040 available at: <https://www.bio-rad-antibodies.com/SDS/MCA170310040>

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**Regulatory** For research purposes only

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## Related Products

### Recommended Secondary Antibodies

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

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

Rabbit Anti Mouse IgG (STAR9...) [FITC](#)

Goat Anti Mouse IgG (Fc) (STAR120...) [FITC](#), [HRP](#)

### **Recommended Negative Controls**

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

**North & South** Tel: +1 800 265 7376

**America** Fax: +1 919 878 3751

Email: [antibody\\_sales\\_us@bio-rad.com](mailto:antibody_sales_us@bio-rad.com)

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Fax: +44 (0)1865 852 739

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**Europe**

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Fax: +49 (0) 89 8090 95 50

Email: [antibody\\_sales\\_de@bio-rad.com](mailto:antibody_sales_de@bio-rad.com)

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)

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