

## Datasheet: MCA6032

<b>Description:</b>	MOUSE ANTI POLYUBIQUITIN (K63-LINKAGE SPECIFIC)
<b>Specificity:</b>	POLYUBIQUITIN (K63-LINKAGE SPECIFIC)
<b>Format:</b>	Purified
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	HWA4C4
<b>Isotype:</b>	IgG2a
<b>Quantity:</b>	50 µl

## 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
Immunohistology - Frozen	▪			1/100
Western Blotting (1)	▪			1/500 - 1/1000
Immunocytochemistry	▪			1/100

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) Specificity for K<sup>63</sup> polyubiquitin is temperature sensitive and excessive heat should be avoided in all applications

<b>Target Species</b>	Broad
<b>Product Form</b>	Purified IgG - liquid
<b>Preparation</b>	Purified IgG prepared by ion exchange chromatography from tissue culture supernatant
<b>Buffer Solution</b>	Phosphate buffered saline
<b>Preservative Stabilisers</b>	<0.1% Sodium Azide (NaN <sub>3</sub> )
<b>Approx. Protein Concentrations</b>	IgG concentration 1.0 mg/ml
<b>Immunogen</b>	Synthetic peptide containing the ubiquitin K <sup>63</sup> -isopeptide motif

<b>Specificity</b>	<p><b>Mouse anti polyubiquitin (K63-linkage specific) antibody</b> clone HWA4C4 recognizes Lysine-63 linked polyubiquitin chains.</p> <p>Ubiquitin, as the name implies, is a ubiquitously expressed and highly conserved protein of 8.6 kDa. The protein is covalently linked to selected lysine residues in a post-translational modification process known as ubiquitylation or ubiquitination. This chemical reaction is mediated by three different protein families; ubiquitin-activating enzymes (also known as E1s), ubiquitin-conjugating enzymes (also known as E2s) and ubiquitin ligases (also known as E3s) (<a href="#">Hershko and Ciechanover 1998</a>).</p> <p>The impact of ubiquitination depends on whether a single ubiquitin moiety (monoubiquitination) or an ubiquitin chain (polyubiquitination) has been attached to a protein. Monoubiquitination tends to trigger cellular processes related to endocytosis and membrane trafficking (<a href="#">Haglund et al. 2003</a>) while the impact of polyubiquitination varies depending on how the ubiquitin residues in the chain have been linked. Attachment of Lysine-48 ubiquitin chains results in degradation by the 20S proteasome while addition of Lysine-63 ubiquitin chains mediates DNA damage and NFkappaB signaling (<a href="#">Chen 2005</a>; <a href="#">Mocciaro and Rape 2012</a>). Lysine-6, Lysine-11, Lysine-27, Lysine-29 and Lysine-33 chains have also been reported (<a href="#">Komander 2009</a> and <a href="#">Ye and Rape 2009</a>).</p>
<b>Western Blotting</b>	<p>Mouse anti polyubiquitin K<sup>63</sup> linkage specific antibody recognizes K<sup>63</sup>-linked polyubiquitin in a wide range of species but does not recognize any other isopeptide-linked polyubiquitinated proteins by Western Blot. Use of milk based blocking reagents is not recommended. 1% BSA in PBS or TBS Tween should be used instead.</p>
<b>References</b>	<p>1. Wang, H. <i>et al.</i> (2008) Analysis of nondegradative protein ubiquitylation with a monoclonal antibody specific for lysine-63-linked polyubiquitin. <a href="#">Proc Natl Acad Sci U S A. 105 (51): 20197-202.</a></p>
<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: 10040: <a href="https://www.bio-rad-antibodies.com/uploads/MSDS/10040.pdf">https://www.bio-rad-antibodies.com/uploads/MSDS/10040.pdf</a>
<b>Regulatory</b>	For research purposes only

## Related Products

### Recommended Secondary Antibodies

Goat Anti Mouse IgG (STAR77...) [HRP](#)

Rabbit Anti Mouse IgG (STAR12...)	<a href="#">RPE</a>
Rabbit Anti Mouse IgG (STAR8...)	<a href="#">DyLight@800</a>
Goat Anti Mouse IgG (STAR76...)	<a href="#">RPE</a>
Human Anti Mouse IgG2a (HCA037...)	<a href="#">HRP</a>
Goat Anti Mouse IgG (Fc) (STAR120...)	<a href="#">FITC</a> , <a href="#">HRP</a>
Goat Anti Mouse IgG IgA IgM (STAR87...)	<a href="#">Alk. Phos.</a> , <a href="#">HRP</a>
Rabbit Anti Mouse IgG (STAR13...)	<a href="#">HRP</a>
Goat Anti Mouse IgG (STAR70...)	<a href="#">FITC</a>
Rabbit Anti Mouse IgG (STAR9...)	<a href="#">FITC</a>
Goat Anti Mouse IgG (H/L) (STAR117...)	<a href="#">Alk. Phos.</a> , <a href="#">DyLight@488</a> , <a href="#">DyLight@550</a> , <a href="#">DyLight@650</a> , <a href="#">DyLight@680</a> , <a href="#">DyLight@800</a> , <a href="#">FITC</a> , <a href="#">HRP</a>

## Recommended Useful Reagents

[TidyBlot WESTERN BLOT DETECTION REAGENT:HRP \(STAR209P\)](#)

<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>
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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](https://bio-rad-antibodies.com/datasheets)  
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