

## Datasheet: MCA6042

<b>Description:</b>	MOUSE ANTI POLYUBIQUITIN
<b>Specificity:</b>	POLYUBIQUITIN
<b>Format:</b>	Purified
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	FK1
<b>Isotype:</b>	IgM
<b>Quantity:</b>	50 µg

## 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
ELISA	▪			
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.

<b>Target Species</b>	Broad
<b>Product Form</b>	Purified IgM - liquid
<b>Preparation</b>	Purified IgM 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>	Ig concentration 1.0 mg/ml
<b>Immunogen</b>	Poly-ubiquitylated lysozyme
<b>Specificity</b>	<b>Mouse anti polyubiquitin antibody, clone FK1</b> recognizes polyubiquitin chains.

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 processes 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) ([Hershko and](#)

[Ciechanover 1998](#)).

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 ([Haglund \*et al.\* 2003](#)) 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 ([Chen 2005](#) and [Mocciaro and Rape 2012](#)). Lysine-6, Lysine-11, Lysine-27, Lysine-29 and Lysine-33 chains have also been reported ([Komander 2009](#) and [Ye and Rape 2011](#)).

When comparing staining of mouse anti polyubiquitin antibody (clone FK1) against staining with mouse anti mono or polyubiquitin antibody (clone FK2) or pan ubiquitin antibody (clone P4D1) one can determine, if a protein target is mono- or polyubiquitinated.

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<b>Western Blotting</b>	Mouse anti polyubiquitin is specific for ubiquitin-protein conjugates and shows no reactivity with free ubiquitin. Use of milk based blocking reagents is not recommended. 1% BSA in PBS or TBS Tween should be used instead.
<b>References</b>	1. Fujimuro, M. <i>et al</i> (1994) Production and characterization of monoclonal antibodies specific to multi-ubiquitin chains of polyubiquitinated proteins. <a href="#">FEBS Lett. 349 (2):173-80</a>
<b>Storage</b>	Store at +4°C. DO NOT FREEZE. This product should be stored undiluted.
<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

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## Related Products

### Recommended Secondary Antibodies

Goat Anti Mouse IgG IgA IgM (STAR87...) [Alk. Phos.](#), [HRP](#)

Goat Anti Mouse IgM (STAR138...) [Alk. Phos.](#)

Human Anti Mouse IgM (HCA040...) [FITC](#)

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