

## Datasheet: MCA2403EL

**BATCH NUMBER 155556**

<b>Description:</b>	MOUSE ANTI HUMAN MICA/MICB:Low Endotoxin
<b>Specificity:</b>	MICA/MICB
<b>Format:</b>	Low Endotoxin
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	6D4
<b>Isotype:</b>	IgG2a
<b>Quantity:</b>	0.5 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	▪			
Immunohistology - Frozen	▪			1/100
Immunohistology - Paraffin			▪	
ELISA			▪	
Immunoprecipitation	▪			
Western Blotting			▪	
Functional Assays	▪			

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.

<b>Target Species</b>	Human
<b>Product Form</b>	Purified IgG - liquid
<b>Preparation</b>	Purified IgG prepared by affinity chromatography on Protein G from tissue culture supernatant
<b>Buffer Solution</b>	Phosphate buffered saline
<b>Preservative Stabilisers</b>	None present

<b>Carrier Free</b>	Yes
<b>Endotoxin Level</b>	< 0.01 EU/ug
<b>Approx. Protein Concentrations</b>	IgG concentration 1.0 mg/ml
<b>Immunogen</b>	MICA transfected C1R cells.
<b>External Database Links</b>	<p><b>UniProt:</b></p> <p><a href="#">Q29980</a>      <a href="#">Related reagents</a></p> <p><a href="#">Q29983</a>      <a href="#">Related reagents</a></p> <p><b>Entrez Gene:</b></p> <p><a href="#">4277</a>          MICB    <a href="#">Related reagents</a></p> <p><a href="#">100507436</a>    MICA    <a href="#">Related reagents</a></p>
<b>Synonyms</b>	PERB11.1, PERB11.2
<b>RRID</b>	AB_620223
<b>Fusion Partners</b>	Spleen cells from immunised RBF/DnJ mice were fused with cells of the P3 mouse myeloma cell line.
<b>Specificity</b>	<p><b>Mouse anti Human MICA/Micb antibody, clone 6D4</b> recognizes non-classical MHC class I chain A (MICA) and non-classical MHC class I chain MICB (MICB).</p> <p>MICA and MICB are stress inducible antigens, which are closely related and appear functionally indistinguishable. MICA and MICB are ligands for NKG2D, an activating receptor on most natural killer (NK) cells, CD8 T cells and gamma delta T cells.</p> <p>MICA is principally expressed on intestinal epithelium, and several epithelial tumors. Expression may be induced to high surface levels by heat shock, oxidative stress, and virus infection.</p> <p>Clone 6D4 is reported to inhibit the cytotoxicity of NK cells stimulated by IFN alpha-treated dendritic cells (<a href="#">Jinushi <i>et al.</i> 2003</a>).</p>
<b>Flow Cytometry</b>	Use 10ul of the suggested working dilution to label 1x10 <sup>6</sup> cells in 100ul.
<b>References</b>	<ol style="list-style-type: none"> <li>Groh, V. <i>et al.</i> (1998) Recognition of stress-induced MHC molecules by intestinal epithelial gammadelta T cells. <a href="#">Science. 279 (5357): 1737-40.</a></li> <li>Bauer, S. <i>et al.</i> (1999) Activation of NK cells and T cells by NKG2D, a receptor for stress-inducible MICA. <a href="#">Science. 285 (5428): 727-9.</a></li> <li>Groh, V. <i>et al.</i> (1999) Broad tumor-associated expression and recognition by tumor-derived gamma delta T cells of MICA and MICB. <a href="#">Proc Natl Acad Sci U S A. 96 (12): 6879-84.</a></li> </ol>

4. Groh, V. *et al.* (2001) Costimulation of CD8alphabeta T cells by NKG2D via engagement by MIC induced on virus-infected cells. [Nat Immunol. 2 \(3\): 255-60.](#)
5. Das, H. *et al.* (2004) Mechanisms of Vdelta1 gammadelta T cell activation by microbial components. [J Immunol. 172 \(11\): 6578-86.](#)
6. Jinushi, M. *et al.* (2003) Critical role of MHC class I-related chain A and B expression on IFN-alpha-stimulated dendritic cells in NK cell activation: impairment in chronic hepatitis C virus infection. [J Immunol. 170 \(3\): 1249-56.](#)
7. Groh, V. *et al.* (2003) Stimulation of T cell autoreactivity by anomalous expression of NKG2D and its MIC ligands in rheumatoid arthritis. [Proc Natl Acad Sci U S A. 100: 9452-7.](#)
8. Jinushi, M. *et al.* (2003) Autocrine/paracrine IL-15 that is required for type I IFN-mediated dendritic cell expression of MHC class I-related chain A and B is impaired in hepatitis C virus infection. [J Immunol. 171: 5423-9.](#)
9. Park, E.J. *et al.* (2003) Clonal expansion of double-positive intraepithelial lymphocytes by MHC class I-related chain A expressed in mouse small intestinal epithelium. [J Immunol. 171: 4131-9.](#)
10. Wu, J. *et al.* (2003) Intracellular retention of the MHC class I-related chain B ligand of NKG2D by the human cytomegalovirus UL16 glycoprotein. [J Immunol. 170: 4196-200.](#)
11. Xu, X. *et al.* (2006) Clinicopathological significance of major histocompatibility complex class I-related chain a and B expression in thyroid cancer. [J Clin Endocrinol Metab. 91: 2704-12.](#)
12. Shi, J. *et al.* (2008) Bortezomib down-regulates the cell-surface expression of HLA class I and enhances natural killer cell-mediated lysis of myeloma. [Blood. 111: 1309-17.](#)

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<b>Storage</b>	Store at -20°C only. Storage in frost-free freezers is not recommended. This product should be stored undiluted. Avoid repeated freezing and thawing as this may denature the antibody. Should this product contain a precipitate we recommend microcentrifugation before use.
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<b>Guarantee</b>	12 months from date of despatch
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<b>Health And Safety Information</b>	Material Safety Datasheet documentation #10162 available at: <a href="https://www.bio-rad-antibodies.com/SDS/MCA2403EL">https://www.bio-rad-antibodies.com/SDS/MCA2403EL</a> 10162
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<b>Regulatory</b>	For research purposes only
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## 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>
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 (STAR77...) [HRP](#)

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

### **Recommended Negative Controls**

[MOUSE IgG2a NEGATIVE CONTROL:Low Endotoxin \(MCA929EL\)](#)

<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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