

Datasheet: MCA5751

**BATCH NUMBER 164237**

<b>Description:</b>	MOUSE ANTI HUMAN EOSINOPHIL MAJOR BASIC PROTEIN
<b>Specificity:</b>	EOSINOPHIL MAJOR BASIC PROTEIN
<b>Format:</b>	Purified
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	BMK-13
<b>Isotype:</b>	IgG1
<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
Immunohistology - Frozen (1)	▪			1/20 - 1/50
Immunohistology - Paraffin (2)	▪			1/20 - 1/50

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) **It is recommended that sections are fixed in a 1:1 mixture of acetone and methanol and air-dried for 1 hour. Good results may be achieved via staining with the [APAAP](#) method.**

(2) **This product requires enzymatic pre-treatment of paraffin sections prior to staining. Pepsin is recommended for this purpose. NB. Heat-mediated antigen retrieval methods should not be used.**

<b>Target Species</b>	Human
<b>Species Cross Reactivity</b>	<p>Reacts with: Rat</p> <p>Reacts weakly with: Guinea Pig</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>	Antibody purified from tissue culture supernatant
<b>Buffer Solution</b>	Phosphate buffered saline
<b>Preservative</b>	0.02% Sodium Azide (NaN <sub>3</sub> )
<b>Stabilisers</b>	0.1% Bovine Serum Albumin
<b>Approx. Protein Concentrations</b>	IgG concentration 0.1mg/ml
<b>External Database Links</b>	<p><b>UniProt:</b>  <a href="#">P13727</a>    <a href="#">Related reagents</a></p> <p><b>Entrez Gene:</b>  <a href="#">5553</a>    PRG2    <a href="#">Related reagents</a></p>
<b>Synonyms</b>	MBP
<b>RRID</b>	AB_10671914
<b>Specificity</b>	<p><b>Mouse anti Human Eosinophil Major Basic Protein antibody, clone BMK-13</b> recognises the Eosinophil Major Basic Protein (EMBP), a 117 amino acid protein, corresponding to residues 106-222 of Bone marrow proteoglycan (precursor). Mouse anti Human Eosinophil Major Basic Protein antibody, clone BMK-13 stains both resting and activated eosinophils of bronchial and skin sections of allergic and normal sites and may be considered a Pan eosinophil marker. Mouse anti Human Eosinophil Major Basic Protein antibody, clone BMK-13 cross reacts weakly with basophils which also contain low levels of EMBP. No cross reactivity with other human cells or proteins has been noted.</p>
<b>References</b>	<ol style="list-style-type: none"> <li>1. Moqbel, R. <i>et al.</i> (1992) Application of monoclonal antibodies against major basic protein (BMK-13) and eosinophil cationic protein (EG1 and EG2) for quantifying eosinophils in bronchial biopsies from atopic asthma. <a href="#">Clin Exp Allergy. 22 (2): 265-73.</a></li> <li>2. Hashimoto, Y. <i>et al.</i> (1993) Purification of the antibacterial fragments of guinea-pig major basic protein. <a href="#">Biochim Biophys Acta. 1203 (2): 236-42.</a></li> <li>3. Haczku, A. <i>et al.</i> (1995) T-cells subsets and activation in bronchial mucosa of sensitized Brown-Norway rats after single allergen exposure. <a href="#">Immunology. 85 (4): 591-7.</a></li> <li>4. Underwood, S. <i>et al.</i> (1995) Time-course of antigen-induced airway inflammation in the guinea-pig and its relationship to airway hyperresponsiveness. <a href="#">Eur Respir J. 8 (12): 2104-13.</a></li> <li>5. Mishima, H. <i>et al.</i> (1998) CD4+ T cells can induce airway hyperresponsiveness to allergen challenge in the brown norway rat. <a href="#">Am J Respir Crit Care Med. 158 (6): 1863-70.</a></li> <li>6. Lacy, P. <i>et al.</i> (1998) Intracellular localization of interleukin-6 in eosinophils from atopic asthmatics and effects of interferon gamma. <a href="#">Blood. 91 (7): 2508-16.</a></li> <li>7. Lacy, P. <i>et al.</i> (1999) Rapid mobilization of intracellularly stored RANTES in response to interferon-gamma in human eosinophils. <a href="#">Blood. 94 (1): 23-32.</a></li> <li>8. Walsh, G.M. <i>et al.</i> (1999) Resting and cytokine-stimulated human small airway epithelial</li> </ol>

- cells recognize and engulf apoptotic eosinophils. [Blood. 94 \(8\): 2827-35.](#)
9. Cameron, L. *et al.* (2000) Evidence for local eosinophil differentiation within allergic nasal mucosa: inhibition with soluble IL-5 receptor. [J Immunol. 164 \(3\): 1538-45.](#)
10. Mahmudi-azer, S. *et al.* (2002) Translocation of the tetraspanin CD63 in association with human eosinophil mediator release. [Blood. 99 \(11\): 4039-47.](#)
11. Lacy, P. *et al.* (2003) Divergence of mechanisms regulating respiratory burst in blood and sputum eosinophils and neutrophils from atopic subjects. [J Immunol. 170 \(5\): 2670-9.](#)
12. Isogai S *et al.* (2003) The effects of CD8<sup>+</sup>γδ T cells on late allergic airway responses and airway inflammation in rats. [J Allergy Clin Immunol. 112 \(3\): 547-55.](#)
13. Al-Rabia, M.W. *et al.* (2004) Membrane receptor-mediated apoptosis and caspase activation in the differentiated EoL-1 eosinophilic cell line. [J Leukoc Biol. 75 \(6\): 1045-55.](#)
14. Tulic, M.K. *et al.* (2009) Thymic indoleamine 2,3-dioxygenase-positive eosinophils in young children: potential role in maturation of the naive immune system. [Am J Pathol. 175 \(5\): 2043-52.](#)
15. Dellon, E.S. *et al.* (2012) Diagnostic utility of major basic protein, eotaxin-3, and leukotriene enzyme staining in eosinophilic esophagitis. [Am J Gastroenterol. 107 \(10\): 1503-11.](#)
16. Vanheel, H. *et al.* (2014) Impaired duodenal mucosal integrity and low-grade inflammation in functional dyspepsia. [Gut. 63 \(2\): 262-71.](#)
17. Cirillo, C. *et al.* (2015) Evidence for neuronal and structural changes in submucous ganglia of patients with functional dyspepsia. [Am J Gastroenterol. 110 \(8\): 1205-15.](#)
18. Wiersma, L.C. *et al.* (2015) Pathogenesis of infection with 2009 pandemic H1N1 influenza virus in isogenic guinea pigs after intranasal or intratracheal inoculation. [Am J Pathol. 185 \(3\): 643-50.](#)
19. Wolf, W.A. *et al.* (2015) Predictors of response to steroid therapy for eosinophilic esophagitis and treatment of steroid-refractory patients. [Clin Gastroenterol Hepatol. 13 \(3\): 452-8.](#)
20. Du, L. *et al.* (2016) Increased Duodenal Eosinophil Degranulation in Patients with Functional Dyspepsia: A Prospective Study. [Sci Rep. 6: 34305.](#)
21. Tyler, M.A. *et al.* (2017) Large-scale gene expression profiling reveals distinct type 2 inflammatory patterns in chronic rhinosinusitis subtypes. [J Allergy Clin Immunol. 139 \(3\): 1061-1064.e4.](#)
22. Whelan, K.A. *et al.* (2019) Persistent Basal Cell Hyperplasia is Associated with Clinical and Endoscopic Findings in Patients With Histologically Inactive Eosinophilic Esophagitis. [Clin Gastroenterol Hepatol. Sep 06 \[Epub ahead of print\].](#)
23. Dellon, E.S. *et al.* (2020) Utility of major basic protein, eotaxin-3, and mast cell tryptase staining for prediction of response to topical steroid treatment in eosinophilic esophagitis: analysis of a randomized, double-blind, double dummy clinical trial. [Dis Esophagus. 33\(6\):doaa003.](#)
24. Duan, S. *et al.* (2021) Eosinophil-associated microinflammation in the gastroduodenal tract contributes to gastric hypersensitivity in a rat model of early-life adversity. [Am J Physiol Gastrointest Liver Physiol. 320 \(2\): G206-G216.](#)
25. Duan, S. *et al.* (2022) Yokukansan Suppresses Gastric Hypersensitivity and Eosinophil-associated Microinflammation in Rats With Functional Dyspepsia. [J Neurogastroenterol Motil. 28 \(2\): 255-64.](#)

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**Storage**

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.

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

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<b>Guarantee</b>	Guaranteed until date of expiry. Please see product label.
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<b>Health And Safety Information</b>	Material Safety Datasheet documentation #10041 available at: <a href="https://www.bio-rad-antibodies.com/SDS/MCA5751">https://www.bio-rad-antibodies.com/SDS/MCA5751</a> 10041
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<b>Regulatory</b>	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 (STAR70...)	<a href="#">FITC</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>
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>
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>

### Recommended Negative Controls

[MOUSE IgG1 NEGATIVE CONTROL \(MCA928\)](#)

<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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