

Datasheet: MCA5751

BATCH NUMBER 163501

Description:	MOUSE ANTI HUMAN EOSINOPHIL MAJOR BASIC PROTEIN
Specificity:	EOSINOPHIL MAJOR BASIC PROTEIN
Format:	Purified
Product Type:	Monoclonal Antibody
Clone:	BMK-13
Isotype:	IgG1
Quantity:	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.

	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.**

Target Species	Human
Species Cross Reactivity	<p>Reacts with: Rat</p> <p>Reacts weakly with: Guinea Pig</p> <p>N.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>

Product Form	Purified IgG - liquid
Buffer Solution	Phosphate buffered saline
Preservative Stabilisers	0.02% Sodium Azide (NaN ₃) 0.1% Bovine Serum Albumin
Approx. Protein Concentrations	IgG concentration 0.1mg/ml
External Database Links	<p>UniProt: P13727 Related reagents</p> <p>Entrez Gene: 5553 PRG2 Related reagents</p>
Synonyms	MBP
RRID	AB_10671914
Specificity	<p>Mouse anti Human Eosinophil Major Basic Protein antibody, clone BMK-13 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>
References	<ol style="list-style-type: none"> 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. Clin Exp Allergy. 22 (2): 265-73. 2. Haczku, A. <i>et al.</i> (1995) T-cells subsets and activation in bronchial mucosa of sensitized Brown-Norway rats after single allergen exposure. Immunology. 85 (4): 591-7. 3. Hashimoto, Y. <i>et al.</i> (1993) Purification of the antibacterial fragments of guinea-pig major basic protein. Biochim Biophys Acta. 1203 (2): 236-42. 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. Eur Respir J. 8 (12): 2104-13. 5. Cameron, L. <i>et al.</i> (2000) Evidence for local eosinophil differentiation within allergic nasal mucosa: inhibition with soluble IL-5 receptor. J Immunol. 164 (3): 1538-45. 6. Walsh, G.M. <i>et al.</i> (1999) Resting and cytokine-stimulated human small airway epithelial cells recognize and engulf apoptotic eosinophils. Blood. 94 (8): 2827-35. 7. Lacy, P. <i>et al.</i> (1999) Rapid mobilization of intracellularly stored RANTES in response to interferon-gamma in human eosinophils. Blood. 94 (1): 23-32. 8. Mishima, H. <i>et al.</i> (1998) CD4+ T cells can induce airway hyperresponsiveness to allergen challenge in the brown norway rat. Am J Respir Crit Care Med. 158 (6): 1863-70.

9. 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.](#)
10. Lacy, P. *et al.* (1998) Intracellular localization of interleukin-6 in eosinophils from atopic asthmatics and effects of interferon gamma. [Blood. 91 \(7\): 2508-16.](#)
11. 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.](#)
12. Mahmudi-azer, S. *et al.* (2002) Translocation of the tetraspanin CD63 in association with human eosinophil mediator release. [Blood. 99 \(11\): 4039-47.](#)
13. Du, L. *et al.* (2016) Increased Duodenal Eosinophil Degranulation in Patients with Functional Dyspepsia: A Prospective Study. [Sci Rep. 6: 34305.](#)
14. Vanheel, H. *et al.* (2014) Impaired duodenal mucosal integrity and low-grade inflammation in functional dyspepsia. [Gut. 63 \(2\): 262-71.](#)
15. Haczku, A. *et al.* (1995) T-cells subsets and activation in bronchial mucosa of sensitized Brown-Norway rats after single allergen exposure. [Immunology. 85 \(4\): 591-7.](#)
16. 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.](#)
17. 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.](#)
18. 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.](#)
19. 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.](#)
20. 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.](#)
21. Isogai S *et al.* (2003) The effects of CD8⁺γδ T cells on late allergic airway responses and airway inflammation in rats. [J Allergy Clin Immunol. 112 \(3\): 547-55.](#)
22. 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.](#)
23. 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 \[Epub ahead of print\].](#)
24. 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.](#)
25. 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.](#)
26. 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.](#)

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.

Guarantee Guaranteed until date of expiry. Please see product label.

Health And Safety Information Material Safety Datasheet documentation #10041 available at: <https://www.bio-rad-antibodies.com/SDS/MCA5751>
10041

Regulatory For research purposes only

Related Products

Recommended Secondary Antibodies

Rabbit Anti Mouse IgG (STAR12...) [RPE](#)
Goat Anti Mouse IgG IgA IgM (STAR87...) [HRP](#)
Goat Anti Mouse IgG (STAR76...) [RPE](#)
Rabbit Anti Mouse IgG (STAR13...) [HRP](#)
Goat Anti Mouse IgG (STAR70...) [FITC](#)
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](#)

North & South America	Tel: +1 800 265 7376 Fax: +1 919 878 3751 Email: antibody_sales_us@bio-rad.com	Worldwide	Tel: +44 (0)1865 852 700 Fax: +44 (0)1865 852 739 Email: antibody_sales_uk@bio-rad.com	Europe	Tel: +49 (0) 89 8090 95 21 Fax: +49 (0) 89 8090 95 50 Email: 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
'M382518:210513'

Printed on 18 Jan 2024

© 2024 Bio-Rad Laboratories Inc | [Legal](#) | [Imprint](#)