Datasheet: MCA5751

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

Reacts with: Rat

Reacts weakly with:Guinea Pig

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.

Product Form	Purified IgG - liquid
Preparation	Antibody purified from tissue culture supernatant
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	**UniProt:** P13727 Related reagents **Entrez Gene:** 5553 PRG2 Related reagents
Synonyms	MBP
RRID	AB_10671914
Specificity	**Mouse anti Human Eosinophil Major Basic Protein antibody, clone BMK-13** recongises 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.
References	1. Moqbel, R. *et al.* (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. Hashimoto, Y. *et al.* (1993) Purification of the antibacterial fragments of guinea-pig major basic protein. Biochim Biophys Acta. 1203 (2): 236-42. 3. 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. 4. Underwood, S. *et al.* (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. Mishima, H. *et al.* (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. 6. 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. 7. Lacy, P. *et al.* (1999) Rapid mobilization of intracellularly stored RANTES in response to interferon-gamma in human eosinophils. Blood. 94 (1): 23-32. 8. Walsh, G.M. *et al.* (1999) Resting and cytokine-stimulated human small airway epithelial

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 $CD8^+\gamma\delta$ 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.* (2020) Persistent Basal Cell Hyperplasia Is Associated With Clinical and Endoscopic Findings in Patients With Histologically Inactive Eosinophilic Esophagitis. Clin Gastroenterol Hepatol. 18 (7): 1475-1482.e1.
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.

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
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
Goat Anti Mouse IgG (STAR77...)	HRP
Rabbit Anti Mouse IgG (STAR9...)	FITC
Goat Anti Mouse IgG (Fc) (STAR120...)	FITC, HRP
Rabbit Anti Mouse IgG (STAR13...)	HRP

Recommended Negative Controls

MOUSE IgG1 NEGATIVE CONTROL (MCA928)

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

'M410360:221028'

Printed on 25 Jul 2024

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