# Datasheet: MCA5751 BATCH NUMBER 169098

| Description:  | MOUSE ANTI HUMAN EOSINOPHIL MAJOR BASIC PROTEIN |  |  |
|---------------|---|--|--|
| Specificity:  | EOSINOPHIL MAJOR BASIC PROTEIN                  |  |  |
| Format:       | Purified  |  |  |
| Product Type: | Monoclonal Antibody                             |  |  |
| Clone:        | BMK-13  |  |  |
| Isotype:      | lgG1  |  |  |
| 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 <u>www.bio-rad-antibodies.com/protocols</u> .   |     |    |                |                    |
|-----------------------------|--|-----|----|----------------|--------------------|
|                             |  | Yes | No | Not Determined | Suggested Dilution |
|                             | Immunohistology - Frozen<br>(1)  | •   |    |                | 1/20 - 1/50        |
|                             | Immunohistology - Paraffin<br>(2)  | -   |    |                | 1/20 - 1/50        |
|                             | <ul> <li>(2)</li> <li>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.</li> <li>(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 <u>APAAP</u> method.</li> <li>(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.</li> </ul> |     |    |                |                    |
| Target Species              | Human  |     |    |                |                    |
| Species Cross<br>Reactivity | Reacts with: Rat<br>Reacts weakly with:Guinea Pig<br><b>N.B.</b> Antibody reactivity and working conditions may vary between species. Cross<br>reactivity is derived from testing within our laboratories, peer-reviewed publications or<br>personal communications from the originators. Please refer to references indicated for<br>further information.   |     |    |                |                    |

| Product Form                      | Purified IgG - liquid  |
|-----------------------------------|--|
| Preparation                       | Antibody purified from tissue culture supernatant  |
| Buffer Solution                   | Phosphate buffered saline  |
| Preservative<br>Stabilisers       | 0.02% Sodium Azide (NaN <sub>3</sub> )<br>0.1% Bovine Serum Albumin  |
| Approx. Protein<br>Concentrations | IgG concentration 0.1mg/ml   |
| External Database<br>Links        | UniProt:<br><u>P13727</u> Related reagents<br>Entrez Gene:   |
|                                   | 5553 PRG2 Related reagents   |
| Synonyms                          | MBP  |
| RRID                              | AB_10671914  |
| Specificity                       | Mouse anti Human Eosinophil Major Basic Protein antibody, clone BMK-13<br>recongises the Eosinophil Major Basic Protein (EMBP), a 117 amino acid protein,<br>corresponding to residues 106-222 of Bone marrow proteoglycan (precursor). Mouse anti<br>Human Eosinophil Major Basic Protein antibody, clone BMK-13 stains both resting and<br>activated eosinophils of bronchial and skin sections of allergic and normal sites and may<br>be considered a Pan eosinophil marker. Mouse anti Human Eosinophil Major Basic<br>Protein antibody, clone BMK-13 cross reacts weakly with basophils which also contain low<br>levels of EMBP. No cross reactivity with other human cells or proteins has been noted. |
| References                        |  |

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. <u>J Immunol. 164 (3): 1538-45.</u>

10. Mahmudi-azer, S. *et al.* (2002) Translocation of the tetraspanin CD63 in association with human eosinophil mediator release. <u>Blood. 99 (11): 4039-47.</u>

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> $\gamma\delta$  T cells on late allergic airway responses and airway inflammation in rats. J Allergy Clin Immunol. 112 (3): 547-55.

Al-Rabia, M.W. *et al.* (2004) Membrane receptor-mediated apoptosis and caspase activation in the differentiated EoL-1 eosinophilic cell line. <u>J Leukoc Biol. 75 (6): 1045-55.</u>
 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. <u>Am J Pathol. 175 (5): 2043-52.</u>

15. Dellon, E.S. *et al.* (2012) Diagnostic utility of major basic protein, eotaxin-3, and leukotriene enzyme staining in eosinophilic esophagitis. <u>Am J Gastroenterol. 107 (10):</u> <u>1503-11.</u>

16. Vanheel, H. *et al.* (2014) Impaired duodenal mucosal integrity and low-grade inflammation in functional dyspepsia. <u>Gut. 63 (2): 262-71.</u>

17. Cirillo, C. *et al.* (2015) Evidence for neuronal and structural changes in submucous ganglia of patients with functional dyspepsia. <u>Am J Gastroenterol. 110 (8): 1205-15.</u>
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. <u>Am J Pathol. 185 (3): 643-50.</u>

19. Wolf, W.A. *et al.* (2015) Predictors of response to steroid therapy for eosinophilic esophagitis and treatment of steroid-refractory patients. <u>Clin Gastroenterol Hepatol. 13 (3):</u> 452-8.

20. Du, L. *et al.* (2016) Increased Duodenal Eosinophil Degranulation in Patients with Functional Dyspepsia: A Prospective Study. <u>Sci Rep. 6: 34305.</u>

21. Tyler, M.A. *et al.* (2017) Large-scale gene expression profiling reveals distinct type 2 inflammatory patterns in chronic rhinosinusitis subtypes. <u>J Allergy Clin Immunol. 139 (3):</u> 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. <u>Clin Gastroenterol Hepatol. 18 (7): 1475-1482.e1.</u>

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. <u>Dis</u> <u>Esophagus. 33(6):doaa003.</u>

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. <u>Am J</u> <u>Physiol Gastrointest Liver Physiol. 320 (2): G206-G216.</u>

25. Duan, S. *et al.* (2022) Yokukansan Suppresses Gastric Hypersensitivity and Eosinophil-associated Microinflammation in Rats With Functional Dyspepsia. J <u>Neurogastroenterol Motil. 28 (2): 255-64.</u>

26. Chikkamenahalli, L.L. *et al.* (2024) Single cell atlas of human gastric muscle immune cells and macrophage-driven changes in idiopathic gastroparesis. <u>iScience. 27 (3):</u>

|                                  | <u>108991.</u>  |                      |  |  |
|----------------------------------|---|----------------------|--|--|
| 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 a frost-free freezers is not recommended.  | antibody. Storage in |  |  |
| Guarantee                        | Guaranteed until date of expiry. Please see product label.  |                      |  |  |
| Health And Safety<br>Information | Material Safety Datasheet documentation #10041 available at:<br><u>https://www.bio-rad-antibodies.com/SDS/MCA5751</u><br>10041  |                      |  |  |
| Regulatory                       | For research purposes only  |                      |  |  |

### **Related Products**

#### **Recommended Secondary Antibodies**

| Rabbit Anti Mouse IgG (STAR12)                  | RPE   |  |  |  |
|---|---|--|--|--|
| Goat Anti Mouse IgG IgA IgM (STAR87) <u>HRP</u> |   |  |  |  |
| Goat Anti Mouse IgG (STAR76)                    | RPE   |  |  |  |
| Goat Anti Mouse IgG (STAR70)                    | <u>FITC</u>                                   |  |  |  |
| Goat Anti Mouse IgG (H/L) (STAR117)             | Alk. Phos., DyLight®488, DyLight®550,         |  |  |  |
|   | <u>DyLight®650, DyLight®680, DyLight®800,</u> |  |  |  |
|   | FITC, HRP                                     |  |  |  |
| Rabbit Anti Mouse IgG (STAR13)                  | HRP   |  |  |  |
| Goat Anti Mouse IgG (Fc) (STAR120)              | FITC, HRP                                     |  |  |  |
| Rabbit Anti Mouse IgG (STAR9)                   | <u>FITC</u>                                   |  |  |  |
| Goat Anti Mouse IgG (STAR77)                    | HRP   |  |  |  |
| Recommended Negative Controls                   |   |  |  |  |

Recommended Negative Controls

MOUSE IgG1 NEGATIVE CONTROL (MCA928)

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

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