

## Datasheet: VMA00054

|                      |                         |
|----------------------|-------------------------|
| <b>Description:</b>  | MOUSE ANTI EBP50        |
| <b>Specificity:</b>  | EBP50                   |
| <b>Format:</b>       | Purified                |
| <b>Product Type:</b> | PrecisionAb™ Monoclonal |
| <b>Isotype:</b>      | IgG2b                   |
| <b>Quantity:</b>     | 100 µl                  |

## 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 |
|------------------|-----|----|----------------|--------------------|
| Western Blotting | ■   |    |                | 1/1000             |

**PrecisionAb antibodies have been extensively [validated for the western blot application](#).** The antibody has been validated at the suggested dilution. Where this product has not been tested for use in a particular technique this does not necessarily exclude its use in such procedures. Further optimization may be required dependant on sample type.

|                                 |                                                                                                                                                                                                        |
|---------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Target Species</b>           | Human                                                                                                                                                                                                  |
| <b>Product Form</b>             | Purified IgG - liquid                                                                                                                                                                                  |
| <b>Preparation</b>              | Mouse monoclonal antibody purified by affinity chromatography on Protein G from tissue culture supernatant                                                                                             |
| <b>Buffer Solution</b>          | Phosphate buffered saline                                                                                                                                                                              |
| <b>Preservative Stabilisers</b> | 0.09% Sodium Azide (NaN <sub>3</sub> )                                                                                                                                                                 |
| <b>Immunogen</b>                | Bacterially produced recombinant full length human EBP50.                                                                                                                                              |
| <b>External Database Links</b>  | <p><b>UniProt:</b><br/> <a href="#">O14745</a>    <a href="#">Related reagents</a></p> <p><b>Entrez Gene:</b><br/> <a href="#">9368</a>    SLC9A3R1    <a href="#">Related reagents</a></p>            |
| <b>Synonyms</b>                 | NHERF, NHERF1                                                                                                                                                                                          |
| <b>Specificity</b>              | <b>Mouse anti Human EPB50 antibody</b> recognizes ezrin/radixin/moesin (ERM)-binding phosphoprotein of 50 kDa (EBP50) otherwise known as Na <sup>+</sup> /H <sup>+</sup> exchanger regulatory factor 1 |

(NHERF1), regulatory cofactor of Na(+)/H(+) exchanger, sodium-hydrogen exchanger regulatory factor 1 or solute carrier family 9 isoform A3 regulatory factor 1. EBP50 is a 358 amino acid cytoplasmic adaptor molecule containing two PDZ domains. EBP50 is expressed in tissues containing polarized epithelia, including the small intestine, placenta, liver and kidney.

The ERM family of membrane-cytoskeletal linking proteins act to maintain a regulated linkage between actin filaments (F-actin) and the plasma membrane. Studies have revealed that EBP50 is an important ERM binding partner, which interacts with the N-terminal FERM (four point one ERM) domain of ERM proteins, via its C-terminal domain. EBP50 colocalizes with actin and ezrin, in the apical microvilli of epithelial cells and this role as binding partner has been further shown through the interaction of EBP50 with the transmembrane adaptor protein known as protein associated with glycosphingolipid-enriched microdomains (PAG), in T-cells ([Reczek et al. 1997](#)).

Mutations in the gene encoding EBP50 leads to nephrolithiasis/osteoporosis, hypophosphatemic, 2 disease, characterized by impaired phosphate metabolism ([Courbebaisse et al. 2012](#)). Other ligands which bind to the PDZ domains of EBP50, include beta-catenin, cystic fibrosis transmembrane conductance regulator and the type II Na/Pi cotransporter Npt2, implicating EBP50 in a diverse range of biological systems.

Mouse anti Human EBP50 antibody recognizes EBP50 as a single band of ~50 kDa in western blotting in multiple cell line lysates including myeloid, lymphoid, neuronal, adenocarcinoma, sarcoma and embryonic kidney.

|                                      |                                                                                                                                                                                                                     |
|--------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Western Blotting</b>              | Anti EBP50 antibody detects a band of approximately 50 kDa in Jurkat cell lysates.                                                                                                                                  |
| <b>Instructions For Use</b>          | Please refer to the <a href="#">PrecisionAb western blotting protocol</a> . For additional information on secondary antibody dilution and exposure time see product web page.                                       |
| <b>Storage</b>                       | Store undiluted at -20°C, avoiding repeated freeze thaw cycles.                                                                                                                                                     |
| <b>Shelf Life</b>                    | As supplied, 12 months from date of despatch.                                                                                                                                                                       |
| <b>Acknowledgements</b>              | PrecisionAb™ is a trademark of Bio-Rad Laboratories.                                                                                                                                                                |
| <b>Health And Safety Information</b> | Material Safety Datasheet documentation #10040 available at:<br>Antibody (10040): <a href="https://www.bio-rad-antibodies.com/uploads/MSDS/10040.pdf">https://www.bio-rad-antibodies.com/uploads/MSDS/10040.pdf</a> |
| <b>Regulatory</b>                    | For research purposes only                                                                                                                                                                                          |

## Related Products

### Recommended Secondary Antibodies

Goat Anti Mouse IgG (H/L) (STAR207...) [HRP](#)

### Recommended Negative Controls

[MOUSE IgG2b NEGATIVE CONTROL \(MCA691\)](#)

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