

## Datasheet: MCA2154A488T

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|----------------------|-------------------------------------------|
| <b>Description:</b>  | RAT ANTI MOUSE TLR4/MD-2:Alexa Fluor® 488 |
| <b>Specificity:</b>  | TLR4/MD-2                                 |
| <b>Format:</b>       | ALEXA FLUOR® 488                          |
| <b>Product Type:</b> | Monoclonal Antibody                       |
| <b>Clone:</b>        | MTS510                                    |
| <b>Isotype:</b>      | IgG2a                                     |
| <b>Quantity:</b>     | 25 TESTS/0.25ml                           |

## 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 |
|----------------|-----|----|----------------|--------------------|
| Flow Cytometry | ■   |    |                | Neat               |

Where this antibody has not been tested for use in a particular technique this does not necessarily exclude its use in such procedures. It is recommended that the user titrates the antibody for use in their own system using appropriate negative/positive controls.

|                                       |                                                             |                            |                          |
|---------------------------------------|-------------------------------------------------------------|----------------------------|--------------------------|
| <b>Target Species</b>                 | Mouse                                                       |                            |                          |
| <b>Product Form</b>                   | Purified IgG conjugated to Alexa Fluor® 488 - liquid        |                            |                          |
| <b>Max Ex/Em</b>                      | <b>Fluorophore</b>                                          | <b>Excitation Max (nm)</b> | <b>Emission Max (nm)</b> |
|                                       | Alexa Fluor®488                                             | 495                        | 519                      |
| <b>Buffer Solution</b>                | Phosphate buffered saline                                   |                            |                          |
| <b>Preservative Stabilisers</b>       | 0.09% Sodium Azide                                          |                            |                          |
|                                       | 1% Bovine Serum Albumin                                     |                            |                          |
| <b>Approx. Protein Concentrations</b> | IgG concentration 0.05 mg/ml                                |                            |                          |
| <b>Immunogen</b>                      | Ba/F3 cell line transfected with mouse TLR4 and MD-2.       |                            |                          |
| <b>External Database Links</b>        | <b>UniProt:</b>                                             |                            |                          |
|                                       | <a href="#">Q9QUK6</a> <a href="#">Related reagents</a>     |                            |                          |
|                                       | <b>Entrez Gene:</b>                                         |                            |                          |
|                                       | <a href="#">21898</a> Tlr4 <a href="#">Related reagents</a> |                            |                          |
| <b>Synonyms</b>                       | Lps                                                         |                            |                          |

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|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Specificity</b>      | <p><b>Rat anti Mouse TLR4/MD-2 antibody, clone MTS510</b> recognizes mouse toll-like receptor 4 (TLR4), when associated with MD-2 and co-precipitates MD-2 with TLR4. Rat anti Mouse TLR4/MD-2 antibody, clone MTS510 does not detect TLR4 alone. TLR4 mediates the innate immune response to bacterial lipopolysaccharide through co-operation with MD-2 and CD14.</p> <p>Clone Rat anti Mouse TLR4/MD-2 antibody, clone MTS510 has been reported to block LPS-induced cytokine production.</p> <p>N.B. Clone MTS510 binds to an epitope of TLR4/MD-2 that is lost after LPS stimulation (<a href="#">Akashi et al. 2003</a>).</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Flow Cytometry</b>   | <p>Use 10ul of the suggested working dilution to label 10<sup>6</sup> cells in 100ul.</p> <p>The Fc region of monoclonal antibodies may bind non-specifically to cells expressing low affinity fc receptors. This may be reduced by using SeroBlock FcR (<a href="#">BUF041A/B</a>).</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>References</b>       | <ol style="list-style-type: none"> <li>1. Akashi, S. <i>et al.</i> (2000) Cutting edge: cell surface expression and lipopolysaccharide signaling via the toll-like receptor 4-MD-2 complex on mouse peritoneal macrophages. <a href="#">J Immunol. 164 (7): 3471-5.</a></li> <li>2. Akashi, S. <i>et al.</i> (2003) Lipopolysaccharide interaction with cell surface Toll-like receptor 4-MD-2: higher affinity than that with MD-2 or CD14. <a href="#">J Exp Med. 198 (7): 1035-42.</a></li> <li>3. Akashi, S. <i>et al.</i> (2000) Cutting edge: cell surface expression and lipopolysaccharide signaling via the toll-like receptor 4-MD-2 complex on mouse peritoneal macrophages. <a href="#">J Immunol. 164 (7): 3471-5.</a></li> <li>4. Stott, B. &amp; Korbelik, M. (2007) Activation of complement C3, C5, and C9 genes in tumors treated by photodynamic therapy. <a href="#">Cancer Immunol Immunother. 56 (5): 649-58.</a></li> <li>5. Dimayuga, F.O. <i>et al.</i> (2005) Estrogen and brain inflammation: effects on microglial expression of MHC, costimulatory molecules and cytokines. <a href="#">J Neuroimmunol. 161 (1-2): 123-36.</a></li> <li>6. Becker, M. <i>et al.</i> (2006) Expression of the class A macrophage scavenger receptor on specific subpopulations of murine dendritic cells limits their endotoxin response. <a href="#">Eur J Immunol. 36 (4): 950-60.</a></li> <li>7. Sack, U. <i>et al.</i> (2005) A novel model of fibroblast-mediated cartilage destruction. <a href="#">Scand J Immunol. 61 (1): 18-28.</a></li> </ol> |
| <b>Storage</b>          | <p>Store at +4°C or at -20°C if preferred.</p> <p>This product should be stored undiluted.</p> <p>Storage in frost-free freezers is not recommended. This product is photosensitive and should be protected from light.</p> <p>Avoid repeated freezing and thawing as this may denature the antibody. Should this product contain a precipitate we recommend microcentrifugation before use.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Shelf Life</b>       | <p>18 months from date of despatch.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Acknowledgements</b> | <p>This product is provided under an intellectual property licence from Life Technologies Corporation. The transfer of this product is contingent on the buyer using the purchase product solely in research, excluding contract research or any fee for service research, and the buyer must not sell or otherwise transfer this product or its components for (a) diagnostic, therapeutic or prophylactic purposes; (b) testing, analysis or screening services, or information in return for compensation on a per-test basis; (c) manufacturing or quality assurance or quality control, or (d) resale, whether or not resold for use in research. For information on purchasing a license to this product for purposes</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

other than as described above, contact Life Technologies Corporation, 5791 Van Allen Way, Carlsbad CA 92008 USA or [outlicensing@thermofisher.com](mailto:outlicensing@thermofisher.com)

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| <b>Health And Safety Information</b> | Material Safety Datasheet documentation #10041 available at:<br>10041: <a href="https://www.bio-rad-antibodies.com/uploads/MSDS/10041.pdf">https://www.bio-rad-antibodies.com/uploads/MSDS/10041.pdf</a> |
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|-------------------|----------------------------|
| <b>Regulatory</b> | For research purposes only |
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## Related Products

### Recommended Negative Controls

[RAT IgG2a NEGATIVE CONTROL:Alexa Fluor® 488 \(MCA1212A488\)](#)

|                                  |                                                                                                                                         |                  |                                                                                                                                                 |               |                                                                                                                                                     |
|----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
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