

## DESCRIPTION

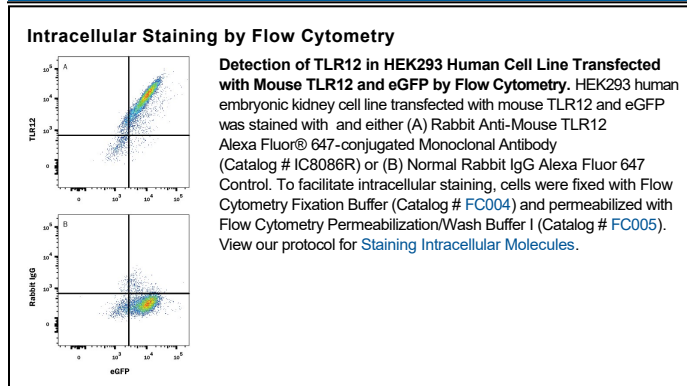
|                           |  |
|---------------------------|--|
| <b>Species Reactivity</b> | Mouse  |
| <b>Specificity</b>        | Detects mouse TLR12 in direct ELISAs.  |
| <b>Source</b>             | Recombinant Monoclonal Rabbit IgG Clone # 1229C  |
| <b>Purification</b>       | Protein A or G purified from cell culture supernatant  |
| <b>Immunogen</b>          | Chinese hamster ovary cell line CHO-derived recombinant mouse TLR12<br>Thr22-Lys709<br>Accession # Q6QNU9  |
| <b>Conjugate</b>          | Alexa Fluor 647<br>Excitation Wavelength: 650 nm<br>Emission Wavelength: 668 nm  |
| <b>Formulation</b>        | Supplied in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details.<br><br>*Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions. |

## APPLICATIONS

**Please Note:** Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

|  | Recommended Concentration  | Sample    |
|--|----------------------------|-----------|
| Intracellular Staining by Flow Cytometry | 5 µg/10 <sup>6</sup> cells | See Below |

## DATA



## PREPARATION AND STORAGE

|                                |  |
|--------------------------------|--|
| <b>Shipping</b>                | The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.                                  |
| <b>Stability &amp; Storage</b> | <b>Protect from light. Do not freeze.</b> <ul style="list-style-type: none"> <li>12 months from date of receipt, 2 to 8 °C as supplied.</li> </ul> |

**BACKGROUND**

Toll-like receptors (TLRs) are type I transmembrane proteins that activate the immune system in response to molecular patterns derived from microbial pathogens. Some TLRs are expressed on the cell surface (TLR1, 2, 4, 5, 6, 10), while others are found in endosomal structures (TLR3, 7, 8, 9, 11, 12, 13). TLRs contain a large number of leucine-rich repeats (LRRs) in their ectodomains and a cytoplasmic tail with one signal transducing Toll/IL-1 receptor (TIR) domain (1, 2). Mature mouse TLR12 is an approximately 100 kDa glycoprotein that belongs to the TLR11 family of TLRs. It consists of a 688 amino acid (aa) ectodomain with 17 LRRs, a 21 aa transmembrane segment, and a 176 aa cytoplasmic region (3). Over aa21-709, mouse TLR12 shares 80% aa sequence identity with rat TLR12. There is no human counterpart. TLR12 is expressed in dendritic cells, macrophages, and neurons, and in the uterus, liver, kidney, and bladder (3-6). It is up-regulated in the adipose tissue of obesity-prone ob/ob mice fed a high fat diet (7). The intracellular trafficking and sorting of several TLRs (including TLR12) is dependent on the endoplasmic reticulum resident protein UNC93B1 (8, 9). TLR12 can associate into homodimers as well as heterodimers with TLR11 (4). TLR11 can additionally heterodimerize with TLR3 and TLR7 (4, 8). TLR12 is required for the inflammatory response against uropathogenic bacteria and *Toxoplasma gondii* (3, 4). It directly binds Profilin from *T. gondii*, and it cooperates with TLR11 in protecting against *T. gondii* infection *in vivo* (4).

**References:**

1. Hopkins, P.A. and S. Sriskandan (2005) Clin. Exp. Immunol. **140**:395.
2. Song, D.H. and J.O. Lee (2012) Immunol. Rev. **250**:216.
3. Zhang, D. *et al.* (2004) Science **303**:1522.
4. Koblansky, A.A. *et al.* (2013) Immunity **38**:119.
5. Mishra, B.B. *et al.* (2008) J. Neuroinflammation **5**:53.
6. Hickey, D.K. *et al.* (2013) Innate Immun. **19**:121.
7. Kim, S.J. *et al.* (2012) J. Nutr. Biochem. **23**:113.
8. Andrade, W.A. *et al.* (2013) Cell Host Microbe **13**:42.
9. Lee, B.L. *et al.* (2013) ELife **2**:e00291.

**PRODUCT SPECIFIC NOTICES**

This product is provided under an agreement between Life Technologies Corporation and R&D Systems, Inc, and the manufacture, use, sale or import of this product is subject to one or more US patents and corresponding non-US equivalents, owned by Life Technologies Corporation and its affiliates. The purchase of this product conveys to the buyer the non-transferable right to use the purchased amount of the product and components of the product only in research conducted by the buyer (whether the buyer is an academic or for-profit entity). The sale of this product is expressly conditioned on the buyer not using the product or its components (1) in manufacturing; (2) to provide a service, information, or data to an unaffiliated third party for payment; (3) for therapeutic, diagnostic or prophylactic purposes; (4) to resell, sell, or otherwise transfer this product or its components to any third party, or for any other commercial purpose. Life Technologies Corporation will not assert a claim against the buyer of the infringement of the above patents based on the manufacture, use or sale of a commercial product developed in research by the buyer in which this product or its components was employed, provided that neither this product nor any of its components was used in the manufacture of such product. For information on purchasing a license to this product for purposes other than research, contact Life Technologies Corporation, Cell Analysis Business Unit, Business Development, 29851 Willow Creek Road, Eugene, OR 97402, Tel: (541) 465-8300. Fax: (541) 335-0354.