

# Product Information

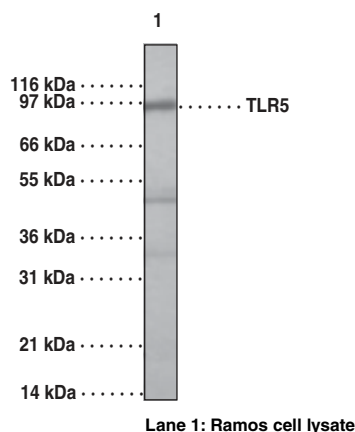


## Toll-Like Receptor 5 Polyclonal Antibody (Clone 85B152.5)

Item No. 13595

- Contents:** This vial contains 100 µg of protein G-purified IgG in 200 µl PBS containing 0.05% BSA and 0.05% sodium azide.
- Synonym:** TLR5
- Antigen:** Synthetic peptide from human TLR5
- Isotype:** IgG<sub>2a</sub>
- Host:** Mouse, clone 85B152.5
- Cross Reactivity:** (+) Canine, human, and mouse TLR3
- Storage:** ≤6 months at 4°C; ≥6 months at -20°C
- Applications:** Western blot (WB) and flow cytometry (FC) (intracellular and cell surface). The recommended starting dilution for WB is 1-3 µg/ml and FC (intracellular) is 1-3 µg/1x10<sup>6</sup> cells.

The toll-like receptors (TLRs) in mammals comprise a family of transmembrane proteins characterized by multiple copies of leucine rich repeats in the extracellular domain and an interleukin-1 (IL-1) receptor motif in the cytoplasmic domain. Like their counterparts in *Drosophila*, TLRs signal through adaptor molecules.<sup>1</sup> The TLR family is a phylogenetically conserved mediator of innate immunity that is essential for microbial recognition.<sup>2</sup> Most mammalian species have between ten and fifteen types of TLRs. Ten functional TLRs (TLR1-10) have been identified in human. Humans also encode a TLR11 gene but it contains several stop codons and protein is not expressed. However, mouse and rat TLR11 are functional, and it is thought that human TLR11 function was lost during evolution. Historically speaking, TLR expression has been most extensively studied in the immune system. Overall, TLRs are highly expressed in immune competent cells, including macrophages, dendritic cells, neutrophils, mucosal epithelial cells and dermal endothelial cells. However, TLRs have also been identified in many other cell types and anatomical tissue locations where they are expressed either constitutively or induced during infection. TLR5 expression is upregulated following exposure to bacteria or to the TLR5 agonist, flagellin. Gram-negative bacteria stimulate monocyte/macrophage cells in a TLR5-specific, CD14-independent manner. TLR5 thus appears to be the principal means by which the innate immune system recognizes flagellated bacterial pathogens.



### References

1. Srivastava, M.D., Srivastava, B.I.S. Expression of mRNA and proteins for toll-like receptors, associated molecules, defensins and LL-37 by SRIK-NKL, and CD<sup>8</sup> NK/T cell line. *Leukemia Research* **29**(7), 813-820 (2005).
2. Gibson, F.C., Hong, C., Chou, H.-H., *et al.* Innate immune recognition of invasive bacteria accelerates atherosclerosis in apolipoprotein E-deficient mice. *Circulation* **109**, 2801-2806 (2004).

### Related Products

For a list of related products please visit: [www.caymanchem.com/catalog/13595](http://www.caymanchem.com/catalog/13595)

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This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Material Safety Data Sheet, which has been sent via email to your institution.

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