

# Product Information



## Toll-Like Receptor 3 Polyclonal Antibody (Clone 40C1285.6)

Catalog No. 13588

<b>Contents:</b>	This vial contains 100 µg mg of protein G-purified IgG in 0.2 ml PBS containing 0.05% BSA and 0.05% sodium azide.
<b>Synonyms:</b>	TLR3
<b>Antigen:</b>	Synthetic peptide from human TLR3 amino acids 55-70 (VLNLTHNQRLRLPAAN)
<b>Isotype:</b>	IgG <sub>1κ</sub>
<b>Host:</b>	Mouse, clone 40C1285.6
<b>Cross Reactivity:</b>	(+) Canine and human TLR3
<b>Storage:</b>	≤6 months at 4°C; ≥6 months at -20°C
<b>Applications:</b>	Western blot (WB), flow cytometry (FC) (intracellular and cell surface), immunoprecipitation (IP), immunohistochemistry, and immunocytochemistry. The recommended starting dilution for WB is 1-3 µg/ml, FC (intracellular) is 2-4 µg/1x10 <sup>6</sup> cells, and IP is 2 µg/1x10 <sup>6</sup> .

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. TLR3 cDNA codes for a protein with approximate molecular weight of 120 kDa.<sup>3</sup> TLR3 has a restricted expression pattern being expressed in dendritic cells (DC).<sup>3-5</sup> The expression of TLR3 in a single cell type may indicate a specific role for this molecule in a restricted setting.

### 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).
3. Schneeman, T.A., Bruno, M.E.C., Schjerven, H., *et al.* Regulation of the polymeric Ig receptor by signaling through TLRs 3 and 4: Linking innate and adaptive immune responses. *J. Immunol.* **175**, 376-384 (2005).
4. Matsumoto, M., Funami, K., Tanabe, M., *et al.* Subcellular localization of toll-like receptor 3 in human dendritic cells. *J. Immunol.* **171**, 3154-3162 (2003).
5. de Bouteiller, O., Merck, E., Hasan, U.A., *et al.* Recognition of double-stranded RNA by human toll-like receptor 3 and downstream receptor signaling requires multimerization and an acidic pH. *J. Biol. Chem.* **280**(46), 38133-38145 (2005).

### Related Products

Toll-Like Receptor 1 Polyclonal Antibody - Cat. No. 13582 • Toll-Like Receptor 2 Monoclonal Antibody (Clone TL2.1) - Cat. No. 13587 • Toll-Like Receptor 4 Monoclonal Antibody (Clone HTA125) - Cat. No. 13589 • Toll-Like Receptor 5 Monoclonal Antibody (Clone 85B152.5) - Cat. No. 13595 • Toll-Like Receptor 6 Polyclonal Antibody - Cat. No. 13590 • Toll-Like Receptor 7 Polyclonal Antibody - Cat. No. 13591 • Toll-Like Receptor 8 Monoclonal Antibody (Clone 44C143) - Cat. No. 13592 • Toll-Like Receptor 9 Monoclonal Antibody (Clone 26C593.2) - Cat. No. 13593 • Toll-Like Receptor 10 Monoclonal Antibody - Cat. No. 13584 • Toll-Like Receptor 11 Polyclonal Antibody - Cat. No. 13585 • Toll-Like Receptor 12 Polyclonal Antibody - Cat. No. 13586

**WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY; NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.**

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