Datasheet for ABIN2191964

# anti-TLR9 antibody (Biotin)

2 Images | 7 Publications

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## Overview

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|---|---|
| Quantity: | 50 µg |
| Target: | TLR9 |
| Reactivity: | Human |
| Host: | Mouse |
| Clonality: | Monoclonal |
| Conjugate: | This TLR9 antibody is conjugated to Biotin |
| Application: | Western Blotting (WB), Flow Cytometry (FACS), Immunohistochemistry (Paraffin-embedded Sections) (IHC (p)), Immunofluorescence (IF) |

## Product Details

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| Clone: | 5G5 |
| Isotype: | IgG2a |
| Cross-Reactivity (Details): | Cross reactivity: Canine TLR9 : Yes, Mouse TLR9 : Yes |
| Sterility: | 0.2 µm filtered |

## Target Details

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|---|---|
| Target: | TLR9 |
| Alternative Name: | Toll-Like Receptor 9 (TLR9 Products) |
| Background: | The monoclonal antibody 5G5 recognizes human Toll-like receptor 9. Toll-like receptors (TLRs) are highly conserved from Drosophila to humans and share structural and functional similarities. TLRs constitute of a family of pattern recognition receptors (PRRs) that mediate |

## Target Details

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| | cellular responses to a large variety of pathogens (viruses, bacteria, and parasites) by specific recognition of so-called 'pathogen-associated molecular patterns'. Activation of TLRs, a family of at least 11 different members that function either as homo- or heterodimers, leads to activation of NFκB-dependent and IFN- regulatory factor-dependent signaling pathways. TLRs have a central role in innate immunity and are also required for the development of an adaptive immune response. TLRs are expressed by various cells of the immune system, such as macrophages and dendritic cells. They recognize and respond to molecules derived from bacterial, viral and fungal pathogens. Whereas most TLRs are expressed on the cell surface, TLR9 is expressed intracellularly within one or more endosomal compartments and recognizes nucleic acids. TLR9 detects a rather subtle difference in the DNA of vertebrates compared with that of pathogens. Vertebrate genomic DNAs have mostly methylated CpG dinucleotides where bacterial and viral DNAs have unmethylated CpG dinucleotides. TLR9 undergoes relocation from endoplasmic reticulum to CpG-ODN-containing endosomes. In these endosomes TLR9 becomes a functional receptor after proteolytic cleavage. TLR9 exists as a preformed homodimer and CpG-ODN binding promotes its conformational change, bringing the cytoplasmic TIR-like domains close to each other. This allows a recruitment of the key adapter protein MyD88 which initiates a signalling cascade. The only human immune cell types known to constitutively express TLR9 and to be activated by CpG ODN are pDCs and B cells. TLR9 triggering induces an activation phenotype in the B cells and pDCs, characterized by the expression of costimulatory molecules, resistance to apoptosis, and induces Th1-type immune response profiles. Aliases CD289, TLR9 Immunogen Purified fusion protein of extracellular domain of human TLR9 (AA 1-815) and human IgGFc |
| Pathways: | TLR Signaling, Activation of Innate immune Response, Cellular Response to Molecule of Bacterial Origin, Toll-Like Receptors Cascades |

## Application Details

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| Application Notes: | For immunohistochemistry, flow cytometry and Western blotting, dilutions to be used depend on detection system applied. It is recommended that users test the reagent and determine their own optimal dilutions. The typical starting working dilution is 1:50. Positive RAW264.7 macrophages stimulated with IFNγ control |
| Restrictions: | For Research Use only |

## Handling

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| Buffer: | PBS, containing 0.1 % bovine serum albumin and 0.02 % sodium azide. |

## Handling

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| Preservative: | Sodium azide |
| Precaution of Use: | This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only. |
| Storage: | 4 °C |
| Storage Comment: | Product should be stored at 4 °C. Under recommended storage conditions, product is stable for at least one year. The exact expiry date is indicated on the label. |

## Publications

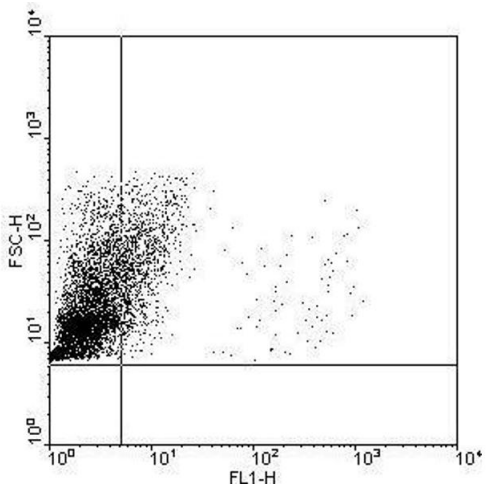
Product cited in:

Zwirner, Felber, Burger, Bitter-Suermann, Riethmüller, Feucht: "Classical pathway of complement activation in mammalian kidneys." in: **Immunology**, Vol. 80, Issue 2, pp. 162-7, ( 1994) (PubMed).

Feucht, Schneeberger, Hillebrand, Burkhardt, Weiss, Riethmüller, Land, Albert: "Capillary deposition of C4d complement fragment and early renal graft loss." in: **Kidney international**, Vol. 43, Issue 6, pp. 1333-8, (1993) (PubMed).

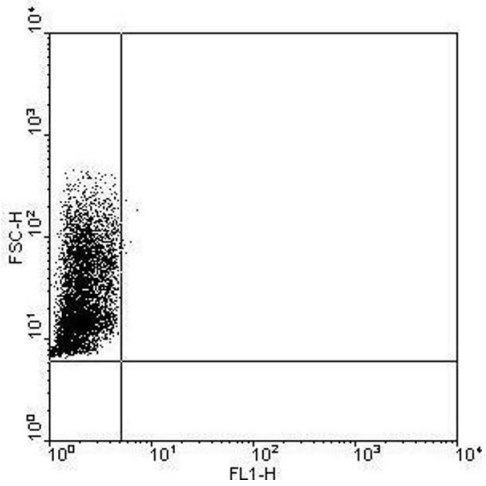
There are more publications referencing this product on: Product page

## Images




**Flow Cytometry**

**Image 1.** THP1 cells were incubated with IgG2a isptype controle (A) or α-TLR9 5G5 mAb (B). Cells (140000) were permeabilized with saponin and stained with 0.4 µg 5G5




## Flow Cytometry

**Image 2.** THP1 cells were incubated with IgG2a isptype controle (A) or α-TLR9 5G5 mAb (B). Cells (140000) were permeabilized with saponin and stained with 0.4 µg 5G5