

## Product datasheet for **AM26253BT-N**

### Tlr9 (1-815) Mouse Monoclonal Antibody [Clone ID: 5G5]

#### Product data:

Product Type:	Primary Antibodies
Clone Name:	5G5
Applications:	ELISA, FC, IF, IHC, WB
Recommended Dilution:	<p><b>Immunohistochemistry on Frozen Sections:</b> 10µm sections were fixed with acetone for 10 minutes. PBS washed sections were incubated with 5G5 1:100 in 1% BSA for 30 minutes at RT. (Ref.7). The typical starting working dilution is 1:50.</p> <p><b>Immunohistochemistry on Paraffin Sections:</b> Paraffin embedded tissues 5µm sections were made. After antigen retrieval (0.01mol/l, pH6 sodium citrate) and quenching of endogenous peroxidase, sections were blocked with 0.5% ovalbumin and 0.1% gelatin for 20 minutes at RT. Sections were incubated with 5G5 for 1 hour at 37°C. (Ref.3). The typical starting working dilution is 1:50.</p> <p><b>Flow Cytometry</b> (Ref.1,5,6,8): RAW264.7 cells were fixed for 15 minutes with 4% formalin and permeabilized (PBS, 0.5%BSA, 0.5% saponin) at RT. (Ref.1).</p> <p><b>Immunofluorescence</b> (Ref.1,3): Cells were fixed with 2% formalin for 15 minutes at RT and permeabilized with a mAb (4µg/400µl) containing buffer (PBS, 0.2% BSA, 0.2% saponin) for 1 hour. (Ref.1).</p> <p><b>Western blot</b> (Ref.1-4): Reduced lysates were resolved by 10% SDS-PAGE and blotted on nitrocellulose. After blocking with 5% skimmed milk TLR9 was detected with 2µg/ml 5G5 (Ref.1).</p> <p>The typical starting working dilution is 1:50.</p> <p><b>Immunoassay.</b></p> <p><b>Positive Control:</b> RAW macrophages stimulated with IFN-gamma.</p>
Reactivity:	Canine, Human, Mouse
Host:	Mouse
Isotype:	IgG2a
Clonality:	Monoclonal
Immunogen:	Purified fusion protein of extracellular domain of Human TLR9 (AA 1-815) and Human IgGFc
Specificity:	The monoclonal antibody 5G5 recognizes Human Toll-like receptor 9.



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**Formulation:** PBS  
 Label: Biotin  
 State: Liquid 0.2 µm filtered Ig fraction  
 Stabilizer: 0.1% BSA  
 Preservative: 0.02% Sodium Azide

**Concentration:** lot specific

**Purification:** Protein G Chromatography

**Conjugation:** Biotin

**Storage:** Store undiluted at 2-8°C.

**Stability:** Shelf life: one year from despatch.

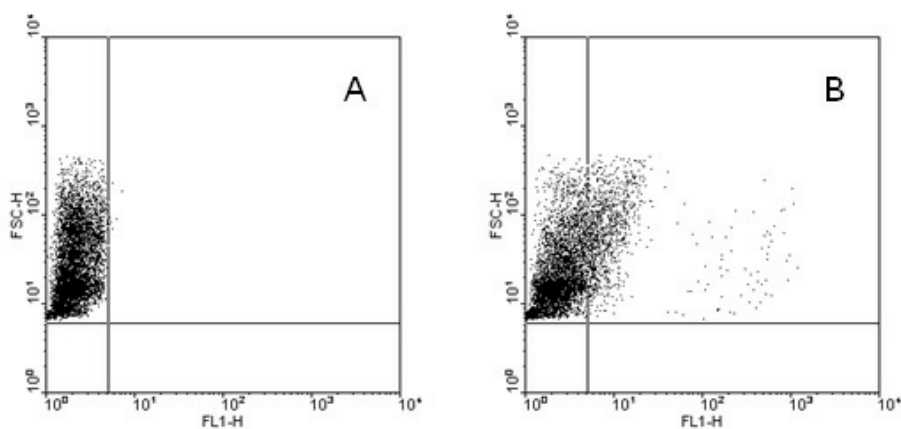
**Gene Name:** toll-like receptor 9

**Database Link:** [Entrez Gene 81897 Mouse Q9EQU3](#)

**Background:** 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 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.

**Synonyms:** Toll-like receptor 9, UNQ5798/PRO19605

## Product images:



THP1 cells were incubated with IgG2a isotype control (A) or a-TLR9 5G5 mAb (B). Cells (140000) were permeabilized with saponin and stained with 0.4 ug 5G5