Mouse TLR9 Antibody

Recombinant Monoclonal Rabbit IgG Clone # 1138D
Catalog Number: MAB7960

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse TLR-9 in direct ELISAs.
Source	Recombinant Monoclonal Rabbit IgG Clone # 1138D
Purification	Protein A or G purified from cell culture supernatant
Immunogen	Chinese hamster ovary cell line CHO-derived recombinant mouse TLR9 Leu26-Asp818 Accession # AAK29625
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 μm filtered solution in PBS.

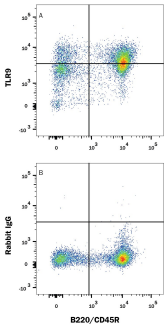
APPLICATIONS

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
Flow Cytometry	0.25 µg/10^6 cells	See Below
Immunocytochemistry	0.5-25 µg/mL	See Below

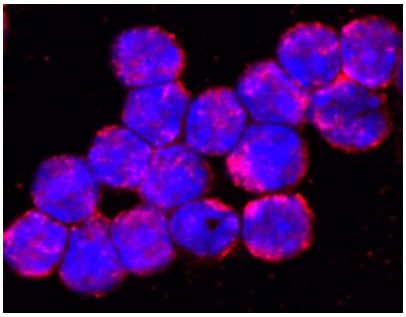
DATA

Flow Cytometry



Detection of TLR9 in Mouse Splenocytes by Flow Cytometry. Mouse splenocytes were stained with Rat Anti-Mouse B220/CD45R APC-conjugated Monoclonal Antibody (Catalog # FAB1217A) and either (A) Rabbit Anti-Mouse TLR9 Monoclonal Antibody (Catalog # MAB7960) or (B) Normal Rabbit IgG Control (Catalog # AB-105-C) followed by Phycoerythrin-conjugated Anti-Rabbit IgG Secondary Antibody (Catalog # F0110).

Immunocytochemistry



TLR9 in Mouse Splenocytes. TLR9 was detected in immersion fixed mouse splenocytes using Rabbit Anti-Mouse TLR9 Monoclonal Antibody (Catalog # MAB7960) at 0.5 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Rabbit IgG Secondary Antibody (red; Catalog # NL004) and counterstained with DAPI (blue). Specific staining was localized to cell surfaces and cytoplasm. View our protocol for Fluorescent ICC Staining of Non-adherent Cells.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

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BACKGROUND

TLR9 (Toll-like receptor 9), designated CD289, is a member of the TLR family of innate immune receptors that is mainly expressed by colonic epithelium, $CD123^+$ plasmacytoid predendritic cells (pDC), and splenic transitional B cells (1-9). TLR9 responds to unmethylated DNA CpG motifs that occur mainly in bacteria and viruses (1, 2). Mouse TLR9 cDNA encodes a 1032 amino acid (aa) type I transmembrane glycoprotein with a 793 aa extracellular domain (ECD) that contains 26 leucine-rich repeats (LRRs, aa 26-818), and a 193 aa cytoplasmic domain with a TIR sequence that dimerizes with signaling adaptors such as MyD88 (1). The mouse TLR9 ECD shares 87% aa sequence identity with rat and 71-74% with human, feline, canine, equine, porcine, bovine and ovine TLR9. Predicted splice forms vary at the N-terminus by initiating either upstream or downstream of the standard site. The full-length 150 kDa form, which is ligand-binding but nonsignaling, is found in the endoplasmic reticulum. It undergoes accessory protein-mediated translocation either to the cell membrane or to lysosomes (1-3). TLR9 is cleaved to remove LRR1-14, producing an 80 kDa signaling fragment within acidic endolysosomes where it encounters microbial CpG DNA rather than self-DNA (2, 10, 11). However, immune complexes of self-DNA with lupus erythematosus anti-DNA antibodies can induce TLR9 activation and IFN-α production in pDC (4). A soluble form also found in endosomes includes all 26 LRRs and negatively regulates active TLR9 (12). Activation of TLR9 contributes to splenocyte proliferation, pDC maturation, macrophage inflammatory cytokine production, Th1 inflammatory responses, NK cell activation and recruitment, B cell surface MHC class II up-regulation and immunoglobulin production, and generation and maintenance of memory B cells (1, 5-9).

References:

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