

DESCRIPTION

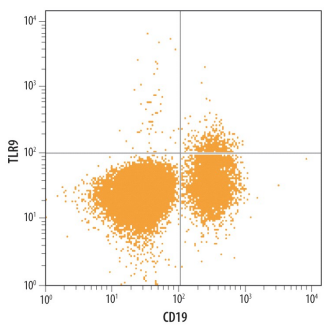
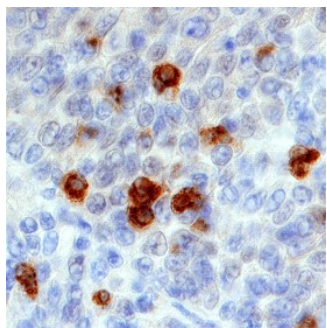
Species Reactivity	Human
Specificity	Detects human TLR9 in direct ELISAs. In direct ELISAs, approximately 75% cross-reactivity with recombinant mouse TLR9 is observed, and less than 1% cross-reactivity with recombinant human (rh) TLR1, rhTLR2, rhTLR3, rhTLR4, rhTLR5, rhTLR7, rhTLR8, and rhTLR10 is observed.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	<i>E. coli</i> -derived recombinant human TLR9 Asn64-Glu189 Accession # Q9NR96
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 either lyophilized or 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	2.5 µg/10 ⁶ cells	See Below
Immunohistochemistry	5-15 µg/mL	See Below
CyTOF-ready	Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.	

DATA

<p>Flow Cytometry</p>  <p>Detection of TLR9 in Human PBMC lymphocytes by Flow Cytometry. Human PBMC lymphocytes were stained with Sheep Anti-Human TLR9 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF3658) followed by NorthernLights™ 637-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # NL011) and Mouse Anti-Human CD19 PE-conjugated Monoclonal Antibody (Catalog # FAB4867P). Quadrant markers were set based on control antibody staining (Catalog # 5-001-A).</p>	<p>Immunohistochemistry</p>  <p>TLR9 in Human Tonsil. TLR9 was detected in immersion fixed paraffin-embedded sections of human tonsil using Sheep Anti-Human TLR9 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF3658) at 1 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Sheep HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS019) and counterstained with hematoxylin (blue). Specific staining was localized to membranes of lymphocytes. View our protocol for Chromogenic IHC Staining of Paraffin-embedded Tissue Sections.</p>
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PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.2 mg/mL.
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. <ul style="list-style-type: none"> • 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.

BACKGROUND

TLR9 (Toll receptor 9; also CD289) is a 145-150 kDa member of the Toll-like receptor family of molecules. It is expressed by colonic epithelium, CD123⁺ plasmacytoid dendritic cells, and transitional B cells, and responds to unmethylated DNA CpG motifs that exhibit either a GTCGTT sequence (in human), or a GACGTT sequence (in mouse). TLR9 is found in the ER, and translocates to either the cell membrane, or to lysosomes where it binds bacterial DNA. Precursor human TLR9 is a type I transmembrane protein 1032 amino acids (aa) in length. It possesses a 793 aa extracellular region that contains 26 LRRs (aa 26-818), plus a 193 aa cytoplasmic domain. The full-length 150 kDa form is suggested to be ligand-binding but non-signaling. The active form is believed to be an 80 kDa cleavage product found in the endosome compartment. There are multiple splice forms. One contains a deletion of aa 2-16, a second possesses an alternate start site at Met58, while a third and fourth show alternative start sites aa 23 and 24 upstream of the standard site. Over aa 64-189, human TLR9 shares 76% aa identity with mouse TLR9.