Human TLR2 Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF2616

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human TLR2 in ELISAs and Western blots. In sandwich ELISAs, less than 1% cross-reactivity with recombinant mouse TLR2 and less than 0.3% cross-reactivity with recombinant human (rh) TLR3 and rhTLR4/MD-2 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human TLR2 Glu21-Leu590 Accession # O60603
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.

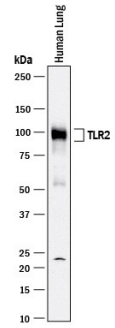
APPLICATIONS

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
Western Blot	1 µg/mL	See Below
Flow Cytometry	0.25 µg/10^6 cells	Human peripheral blood monocytes
Human TLR2 Sandwich Immunoassay		**Reagent**
ELISA Capture	0.2-0.8 µg/mL	Human TLR2 Antibody (Catalog # AF2616)
ELISA Detection	0.1-0.4 µg/mL	Human TLR2 Biotinylated Antibody (Catalog # BAF2616)
Standard		Recombinant Human TLR2 (Catalog # 2616-TR)
CyTOF-ready	Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.	

DATA

Western Blot



Detection of Human TLR2 by Western Blot. Western blot shows lysate of human lung tissue. PVDF membrane was probed with 1 µg/mL of Goat Anti-Human TLR2 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF2616) followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF017). A specific band was detected for TLR2 at approximately 90-100 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 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

Human toll-like receptor (TLR) family includes ten members that activate the innate immune response via an ability to recognize molecular structures found in a variety of microbial pathogens (1-3). All TLR family members are type I transmembrane proteins with a large number of extracellular leucine-rich repeats (LRRs) and a cytoplasmic Toll/IL-1 receptor (TIR) domain. Human TLR2 is synthesized as a 784 amino acid (aa) precursor (2) that contains a signal sequence (aa 1-18), an extracellular domain (aa 19-588) with approximately 20 LRRs, a transmembrane segment (aa 589-609), and a cytoplasmic TIR domain (aa 610-784). The receptor is expressed on a number of cell types including monocytes, dendritic cells, neutrophils, B cells endothelial cells, and hepatocytes (1, 2, 4). TLR2 functions as part of a heterodimeric complex with either TLR1 or TLR6, and possibly other co-receptors (1). These complexes recognize lipoproteins and glycolipids from gram-positive and gram-negative bacteria as well as mycoplasma and yeast. TLR2/TLR1 heterodimers bind triacylated lipopeptides, while the TLR2/TLR6 heterodimer preferentially recognizes diacylated lipopeptides (5). Upon ligand recognition, TLR2 delivers an activating signal via the associated adapter molecules, MyD88 and TIRAP (1, 6). TLR2 signaling results in dendritic cell maturation characterized by increased surface expression of class II MHC and the T cell costimulators, CD80 and CD86 (1, 2). Activation via TLR2 also results in production of a number of pro-inflammatory cytokines including TNF-α, IL-2, IL-6, IL-12, and MIP-2 (1-3).

References:

1. Wetzler, L. (2003) Vaccine **21**:S2/55.
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4. Flo T. *et al.* (2001) J. Leukoc. Biol. **69**:474.
5. Akira S. (2003) Curr. Opin. Immunol. **15**:5.
6. Yamamoto M. *et al.* (2002) Nature **420**:324.

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