

Datasheet for 600-401-956**TLR2 Antibody****Overview**

Description:	Anti-TLR2 (RABBIT) Antibody - 600-401-956
Item No.:	600-401-956
Size:	100 µg
Applications:	ELISA, IF, IHC, WB, Other
Reactivity:	Human, Mouse
Host Species:	Rabbit

Product Details

Background:	TLR2 (Toll Like Receptor 2). Toll-like receptors (TLRs) are signaling molecules that recognize different microbial products during infection and serve as an important link between the innate and adaptive immune responses. These proteins act through adaptor molecules such as MyD88 and TIRAP to activate various kinases and transcription factors such as Protein Kinase C (PKC) alpha/beta and NF-kB. TLR2 can form heterodimers with either TLR1 or TLR6, and as a heterodimer can recognize a variety of bacterial and mycoplasma lipoproteins, respectively. Anti-TLR2 antibody is ideal for investigators involved in cytokines and growth factors research.
Synonyms:	CD282 antibody, Toll like receptor 2 antibody, Toll like receptor 2 precursor antibody, Toll/interleukin 1 receptor like 4 antibody, Toll/interleukin receptor like protein 4 antibody, TIRAP, MAL, TIR domain containing adaptor protein
Host Species:	Rabbit
Clonality:	Polyclonal
Format:	IgG

Target Details

Gene Name:	TLR2
Reactivity:	Human, Mouse
Immunogen Type:	Conjugated Peptide
Immunogen:	TLR2 Antibody was produced from whole rabbit serum prepared by repeated immunizations with a peptide corresponding to amino acids near the n-terminus of human TLR2.

Purity/Specificity: Anti-TLR2 Antibody is affinity chromatography purified via peptide column. A BLAST analysis was used to suggest cross-reactivity with TLR2 with Human and Mouse based on 100% homology with the immunizing sequence. Cross-reactivity with TLR2 from other sources has not been determined.

Relevant Links:

- [NCBI - NP_001305716.1](#)
- [UniProtKB - O60603](#)
- [GeneID - 7097](#)

Application Details

Tested Applications: ELISA, IF, IHC, WB

Suggested Applications: Other (Based on references)

Application Note: TLR2 antibody has been tested for use in ELISA, immunohistochemistry, immunofluorescence, and western blotting. Specific conditions for reactivity should be optimized by the end user. Expect a band approximately 100 kDa in size corresponding to TLR2 protein by western blotting in the appropriate cell lysate or extract.

Assay Dilutions: All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.

ELISA: 1:5,000 - 1:25,000

IF: 10 µg/mL

IHC: 2 µg/mL

WB: 1:500 - 1:3,000

Formulation

Physical State: Liquid (sterile filtered)

Concentration: 1.0 mg/mL by UV absorbance at 280 nm

Buffer: 0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2

Preservative: 0.02% (w/v) Sodium Azide

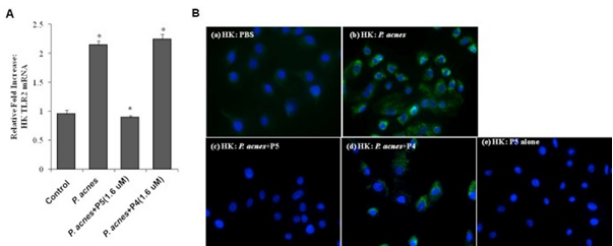
Stabilizer: None

Shipping & Handling

Shipping Condition: Dry Ice

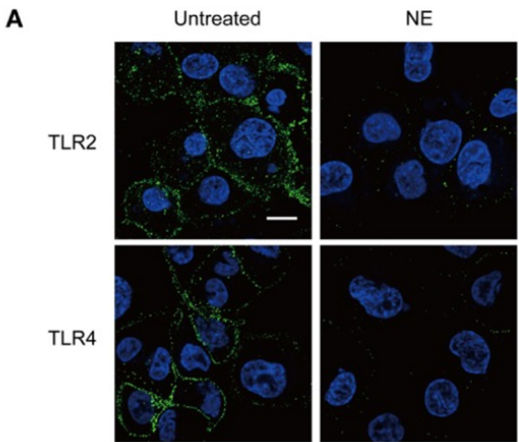
Storage Condition:	Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.
Expiration:	Expiration date is one (1) year from date of receipt.

Images



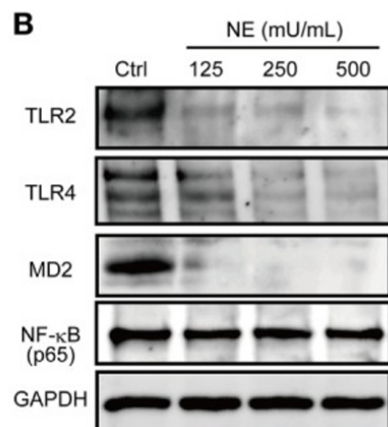
Immunofluorescence Microscopy

(A) Expression of TLR2 mRNA was measured using real-time RT-PCR and normalized to the expression of 18S rRNA. All values are expressed as the mean $\pm$ SD. * $P < 0.001$. (B) Immunofluorescent localization of TLR2 within HKs. *P. acnes*-infected HKs were incubated for 24 h in the presence or absence of 1.6 μ M P5 or P4, after which the distribution of TLR2 was determined by immunofluorescent labeling. FITC-labeled TLR2 is shown in green, while the Hoechst-stained nuclei are blue: (a) treated with PBS; (b) treated with *P. acnes*; (c) treated with *P. acnes* plus P5; (d) treated with *P. acnes* plus P4; (e) treated with P5 alone. Fig 4. PMID: 26197393



Immunofluorescence Microscopy

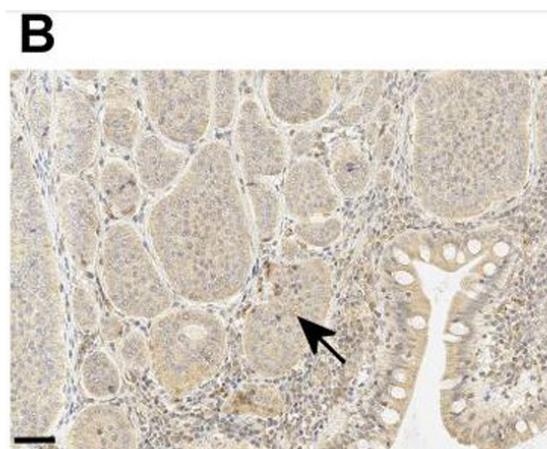
Neutrophil elastase (NE) cleaves TLRs and MD2 on macrophages. (A) THP-1-derived macrophages were cultured in serum free RPMI 1640 and exposed to hNE (125–500 mU/mL) for 4 h. Representative fluorescence microscopy images of untreated and hNE-treated (500 mU/mL) macrophages stained for DNA (DAPI; blue) and TLRs (green). Fig 3. PMID: 29922273



Western Blot

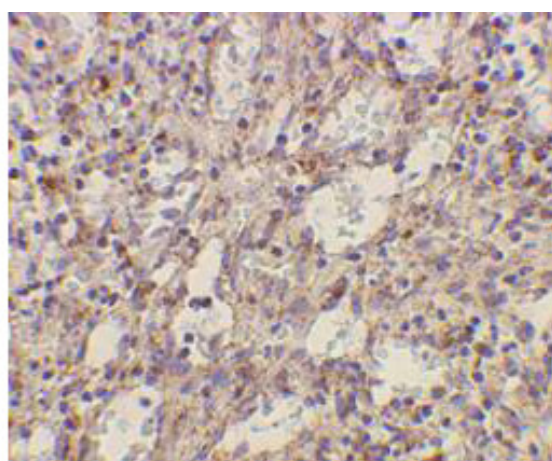
Neutrophil elastase (NE) cleaves TLRs and MD2 on macrophages. (B) THP-1-derived macrophages were cultured in serum free RPMI 1640 and exposed to hNE (125–500 mU/mL) for 4 h. TLR2, TLR4, and TLR-related molecules were determined by western blot analysis.

Fig 3. PMID: 29922273



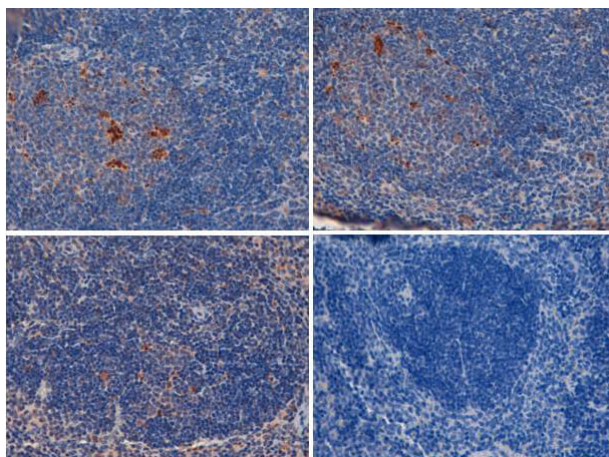
Immunohistochemistry

Immunohistochemical staining examples of Toll-like receptors (TLRs) in representative small bowel neuroendocrine tumor samples showing (B) intermediate TLR2 cytoplasmic intensity, in x20 magnification. The scale bar length is 50 μ m (bottom left corner). Arrows indicate TLR-positive tumor cell islets. Fig 1. PMID: 38709790



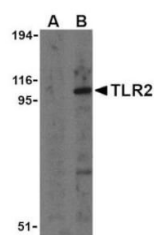
Immunohistochemistry

Immunohistochemistry of Rabbit Anti-TLR2 Antibody. Tissue: human spleen cells. Fixation: paraffin embedded formalin fixed tissue. Antigen retrieval: not required. Primary antibody: TLR-2 antibody at 1:500 for 1 h at RT. Secondary antibody: Peroxidase rabbit secondary antibody at 1:10,000 for 45 min at RT. Localization: TLR2 is cytoplasmic. Staining: TLR 2 as precipitated brown signal with hematoxylin purple nuclear counterstain.



Immunohistochemistry

Immunohistochemistry of rabbit anti TLR2 antibody at 40X with negative control (lower right) Tissue: mouse spleen
 Fixation: FFPE buffered formalin 10% conc Antigen retrieval: Heat, EDTA pH 9.5 Pressure Cooker (left) and Heat, Citrate pH 6.2. Pressure Cooker (right) Primary antibody: 2ug/ml 1 hour @ room T Secondary antibody: Goat anti Rabbit Polymer HRP Prediluted by the manufacturer Staining: antibody as precipitated red signal with a hematoxylin purple nuclear counterstain.



Western Blot

Western Blot of Rabbit Anti-TLR2 Antibody. Lane 1: A20 whole cell lysate in the presence of blocking peptide. Lane 2: A20 whole cell lysate in the absence of blocking peptide. Load: 10 µg per lane. Primary antibody: TLR-2 antibody at 1:1000 for overnight at 4°C. Secondary antibody: IRDye800™ rabbit secondary antibody at 1:10,000 for 45 min at RT. Block: 5% BLOTTO overnight at 4°C. Predicted/Observed size: 100 kDa , 100 kDa for TLR 2. Other band(s): none.

References

- Hiltunen N et al. Toll-like receptors 1-9 in small bowel neuroendocrine tumors-Clinical significance and prognosis. *PLoS One*. (2024)
- Domon, H et al. Neutrophil Elastase Subverts the Immune Response by Cleaving Toll-Like Receptors and Cytokines in Pneumococcal Pneumonia. *Frontiers in Immunology* (2018)
- Ryu, S et al. Suppression of Propionibacterium acnes Infection and the Associated Inflammatory Response by the Antimicrobial Peptide P5 in Mice. *PLoS One* (2015)
- Sweeney, TE et al. A toll-like receptor 2 pathway regulates the Ppargc1a/b metabolic co-activators in mice with Staphylococcal aureus sepsis. *PLoS One* (2011)

Disclaimer

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