# Overview

<table>
<thead>
<tr>
<th><strong>Product name</strong></th>
<th>Anti-TLR4 antibody</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Description</strong></td>
<td>Rabbit polyclonal to TLR4</td>
</tr>
<tr>
<td><strong>Host species</strong></td>
<td>Rabbit</td>
</tr>
<tr>
<td><strong>Specificity</strong></td>
<td>TLR4 expression levels and cleavage or degradation products can vary between different cell and tissue samples. Customers have observed this variability in WB band size and our laboratory has confirmed this variability as well observing lower molecular weight cleavage and degradation products and in some samples a lack of the full length TLR4 band. The TLR4 cleavage and degradation products and potential lack of full length TLR4 are well documented in the literature, including PMID 16885150 and 22927440. We recommend running a positive control human intestine tissue lysate. We have obtained both positive and negative feedback from researchers using this antibody with rat samples (see Abreviews). Due to the inconsistency, we have removed rat as a guaranteed species and welcome any further feedback from researchers using this antibody.</td>
</tr>
</tbody>
</table>

**Tested applications**

- Suitable for: WB, IHC-P, IHC-Fr, Flow Cyt

**Species reactivity**

- Reacts with: Human

**Immunogen**

- Synthetic peptide corresponding to Human TLR4 aa 420-435.
- Sequence: GLEQLEHLDFQ HSNLK
- Database link: O00206

**Properties**

<table>
<thead>
<tr>
<th><strong>Form</strong></th>
<th>Liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Storage instructions</strong></td>
<td>Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.</td>
</tr>
<tr>
<td><strong>Storage buffer</strong></td>
<td>Preservative: 0.05% Sodium azide Constituents: 99% PBS, 0.05% BSA</td>
</tr>
<tr>
<td><strong>Purity</strong></td>
<td>Protein G purified</td>
</tr>
<tr>
<td><strong>Clonality</strong></td>
<td>Polyclonal</td>
</tr>
<tr>
<td><strong>Isotype</strong></td>
<td>IgG</td>
</tr>
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![Abreviews](image) 19 138 7
Function

Cooperates with LY96 and CD14 to mediate the innate immune response to bacterial lipopolysaccharide (LPS). Acts via MYD88, TIRAP and TRAF6, leading to NF-kappa-B activation, cytokine secretion and the inflammatory response. Also involved in LPS-independent inflammatory responses triggered by Ni(2+). These responses require non-conserved histidines and are, therefore, species-specific.

Tissue specificity

Highly expressed in placenta, spleen and peripheral blood leukocytes. Detected in monocytes, macrophages, dendritic cells and several types of T-cells.

Involvement in disease

Genetic variation in TLR4 is associated with age-related macular degeneration type 10 (ARMD10) [MIM:611488]. ARMD is a multifactorial eye disease and the most common cause of irreversible vision loss in the developed world. In most patients, the disease is manifest as ophthalmoscopically visible yellowish accumulations of protein and lipid that lie beneath the retinal pigment epithelium and within an elastin-containing structure known as Bruch membrane.

Sequence similarities

Belongs to the Toll-like receptor family.
Contains 18 LRR (leucine-rich) repeats.
Contains 1 LRRCT domain.
Contains 1 TIR domain.

Domain

The TIR domain mediates interaction with NOX4.

Post-translational modifications

N-glycosylated. Glycosylation of Asn-526 and Asn-575 seems to be necessary for the expression of TLR4 on the cell surface and the LPS-response. Likewise, mutants lacking two or more of the other N-glycosylation sites were deficient in interaction with LPS.

Cellular localization

Membrane.

Applications

Our Abpromise guarantee covers the use of ab13556 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

<table>
<thead>
<tr>
<th>Application</th>
<th>Abreviews</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>WB</td>
<td>⭐⭐⭐⭐⭐</td>
<td>1/500. Use primary at 1/500 dilution in 1xTBS. Incubate at 4C for 18 hours. Secondary should be incubated at 1 hour at room temperature.</td>
</tr>
<tr>
<td>IHC-P</td>
<td>⭐⭐⭐⭐⭐</td>
<td>Use at an assay dependent concentration.</td>
</tr>
<tr>
<td>IHC-Fr</td>
<td>⭐⭐⭐⭐⭐</td>
<td>Use at an assay dependent concentration.</td>
</tr>
<tr>
<td>Flow Cyt</td>
<td>⭐⭐⭐⭐⭐</td>
<td>Use at an assay dependent concentration. ab171870 - Rabbit polyclonal IgG, is suitable for use as an isotype control with this antibody.</td>
</tr>
</tbody>
</table>

Target

Sequence similarities

Belongs to the Toll-like receptor family.
Contains 18 LRR (leucine-rich) repeats.
Contains 1 LRRCT domain.
Contains 1 TIR domain.

Domain

The TIR domain mediates interaction with NOX4.

Post-translational modifications

N-glycosylated. Glycosylation of Asn-526 and Asn-575 seems to be necessary for the expression of TLR4 on the cell surface and the LPS-response. Likewise, mutants lacking two or more of the other N-glycosylation sites were deficient in interaction with LPS.
Anti-TLR4 antibody (ab13556) at 1/1000 dilution + partial recombinant mouse TLR4 protein, 100 ng

Anti-TLR4 antibody (ab13556) at 1/500 dilution + TLR4 transfected Baculovirus-Insect whole cell lysate at 10 μg

Secondary
Anti-Rabbit HRP conjugate at 1/2000 dilution

**Exposure time:** 6 minutes

ab13556 at a 1/100 dilution staining TLR4 in mouse spleen tissue section by Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections).
ab13556 at a 1/100 dilution staining TLR4 in mouse spleen tissue section by Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections).

ab13556 diluted 1/100 detecting TLR4 transfected mouse CHO cells by flow cytometry. The cells were prepared by treatment with collagenase and incubated with the primary antibody for 1 hour at 22°C. An Alexa Fluor® 488 goat anti-rabbit was used as the secondary antibody. Cells gated on live.
Immunohistochemistry (Frozen sections) - Anti-TLR4 antibody (ab13556)

ab13556 at 1/100000 dilution (12 hrs at 4degC) staining TLR4 in mouse colitis colon tissue section by Immunohistochemistry (Formalin-fixed tissue sections). A biotin Goat Anti-Rabbit secondary was used at 1/2000 for 1 hour at RT. Counterstain: Methyl Green at 200µL for 2 mins at RT. Localization: Inflammatory cells.

Flow Cytometry - Anti-TLR4 antibody (ab13556)

Flow cytometry analysis of THP-1 (Human monocytic leukemia cell line). Cells were fixed with 2% formaldehyde for 10 minutes at room temperature. ab13556 was used at 2 μg/10^6 cells for 60 minutes at 37°C (green). Goat Anti- Rabbit Dylight 488 was used as a secondary antibody at 1/200 dilution for 40 minutes at 37°C. Isotype control was Rabbit IgG under the same conditions (blue).

Please note: All products are “FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES”

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