Product datasheet

Anti-IRAKM antibody ab8116

Overview

Product name: Anti-IRAKM antibody
Description: Rabbit polyclonal to IRAKM
Host species: Rabbit
Specificity: Anti-IRAK-M has no cross response to IRAK or IRAK2.
Tested applications: Suitable for: ICC/IF, IHC-P, WB
Species reactivity: Reacts with: Mouse, Rat, Sheep, Human
Immunogen: Synthetic peptide: CSSKFSWDEYEQYKE, corresponding to C terminal amino acids 581-596 of Human IRAKM (Peptide available as ab6231.)

Positive control: Mouse spleen or rat kidney tissue lysate.

General notes:
Interleukin-1 (IL-1) and lipopolysaccharide (LPS) induces cellular response through IL-1 receptor (IL-1R) and Toll like receptors (TLR). IL-1 receptor associated kinase (IRAK and IRAK2) mediates the activation of NF-kB by IL-1/Toll receptors (Wesche H et al. 1999; Muzio M et al. 1997), which is a pivotal transcription factor mediating inflammatory and immune response. A novel member in the IRAK/Pelle family was recently identified and designated IRAK-M (Cao Z et al. 1996). IRAKs associate with IL-1/Toll receptors after IL-1 or LPS stimulation and the dominant negative mutants of IRAKs inhibit IL-1 or LPS induced NF-kB activation. Members in IRAK/Pelle family play a central role in IL-1R/TLR mediated inflammatory responses to cytokine IL-1 and LPS.

Properties

Form: Liquid
Storage instructions: 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. Stable for 12 months at -20°C.
Storage buffer: Preservative: 0.02% Sodium azide
Purity: Affinity purified
Purification notes: Purified IgG prepared by ion exchange chromatography. IRAK-M Antibody is affinity chromatography purified via peptide column.
Primary antibody notes

Interleukin-1 (IL-1) and lipopolysaccharide (LPS) induce cellular response through IL-1 receptor (IL-1R) and Toll like receptors (TLR). IL-1 receptor associated kinase (IRAK and IRAK2) mediates the activation of NF-kB by IL-1/Toll receptors (Wesche H et al.1999, Muzio M et al.1997), which is a pivotal transcription factor mediating inflammatory and immune response. A novel member in the IRAK/Pelle family was recently identified and designated IRAK-M (Cao Z et al.1996). IRAKs associate with IL-1/Toll receptors after IL-1 or LPS stimulation and the dominant negative mutants of IRAKs inhibit IL-1 or LPS induced NF-kB activation. Members in IRAK/Pelle family play a central role in IL-1R/TLR mediated inflammatory responses to cytokine IL-1 and LPS.

Clonality
Polyclonal

Isotype
IgG

Applications

Our Abpromise guarantee covers the use of ab8116 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>
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<tbody>
<tr>
<td>ICC/IF</td>
<td></td>
<td>Use at an assay dependent concentration. PubMed: 20585389</td>
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<tr>
<td>IHC-P</td>
<td></td>
<td>Use a concentration of 2 µg/ml.</td>
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<tr>
<td>WB</td>
<td>★★★★☆</td>
<td>Use a concentration of 0.5 - 1 µg/ml. Can be blocked with IRAK peptide (ab6231).</td>
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Target

Function
Inhibits dissociation of IRAK1 and IRAK4 from the Toll-like receptor signaling complex by either inhibiting the phosphorylation of IRAK1 and IRAK4 or stabilizing the receptor complex.

Tissue specificity
Expressed predominantly in peripheral blood lymphocytes.

Involvement in disease
Defects in IRAK3 are associated with susceptibility to asthma-related traits type 5 (ASRT5) [MIM:611064]. Asthma-related traits include clinical symptoms of asthma, such as coughing, wheezing, dyspnea, bronchial hyperresponsiveness as assessed by methacholine challenge test, serum IgE levels, atopy, and atopic dermatitis.

Sequence similarities
Belongs to the protein kinase superfamily. TKL Ser/Thr protein kinase family. Pelle subfamily. Contains 1 death domain. Contains 1 protein kinase domain.

Images
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) of A20 cells staining IRAKM with ab8116 at 20 µg/ml.

Western blot analysis of IRAKM in mouse spleen (M) and rat liver (R) tissue lysates with anti-IRAKM at 1 µg/ml.

**All lanes**: Anti-IRAKM antibody (ab8116) at 1 µg/ml

**Lane 1**: Mouse spleen tissue lysates

**Lane 2**: Rat liver tissue lysate

**Observed band size**: 68 kDa

*why is the actual band size different from the predicted?*
Immunohistochemical staining of rat liver tissue using IRAK-M antibody at 2 µg/ml.

ab8116 at 2µg/ml staining IRAKM in rat liver cells by IHC

ab8116 staining IRAKM in murine lung macrophages by Immunocytochemistry/ Immunofluorescence.<br>

The cells were permeabilized with a 1:1 mixture of methanol and acetone. After washing with PBS, ab8116 was applied and the cells incubated for one hour. After washing, antibodies against the primary antibody labeled with FITC were applied to the cells and incubated for one hour. The cell were then mounted in DAPI mounting media and viewed on the fluorescent microscope.
Immunofluorescence of IRAK-M in Rat Liver cells using ab8116 at 10 μg/ml.

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