

Product datasheet

Anti-IRAK4 antibody [2H9] ab119942

KO VALIDATED

[6 References](#) [8 Images](#)

Overview

| | |
|----------------------------|---|
| Product name | Anti-IRAK4 antibody [2H9] |
| Description | Mouse monoclonal [2H9] to IRAK4 |
| Host species | Mouse |
| Tested applications | Suitable for: WB, ELISA, IHC-P, Flow Cyt, ICC/IF |
| Species reactivity | Reacts with: Mouse, Human, African green monkey, Recombinant fragment |
| Immunogen | Recombinant fragment, corresponding to amino acids 21-198 of Human IRAK4 |
| Positive control | Recombinant IRAK4 protein; THP-1, HeLa, K562, MCF7, U-87 MG, RAW264.7, Jurkat and Cos7 cell lysates; Human lung cancer and kidney cancer tissues; HeLa cells This antibody gave a positive result in IF in the following Formaldehyde fixed cell line: HepG2. |
| General notes | <p>The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.</p> <p>If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As</p> |

Properties

| | |
|-----------------------------|---|
| Form | Liquid |
| Storage instructions | Shipped at 4°C. Store at +4°C short term (1-2 weeks). Store at -20°C long term. |
| Storage buffer | Preservative: 0.05% Sodium azide Constituent: PBS |
| Purity | Protein G purified |
| Purification notes | Purified from tissue culture supernatant. |
| Clonality | Monoclonal |
| Clone number | 2H9 |
| Isotype | IgG1 |

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab119942 in the following tested applications.

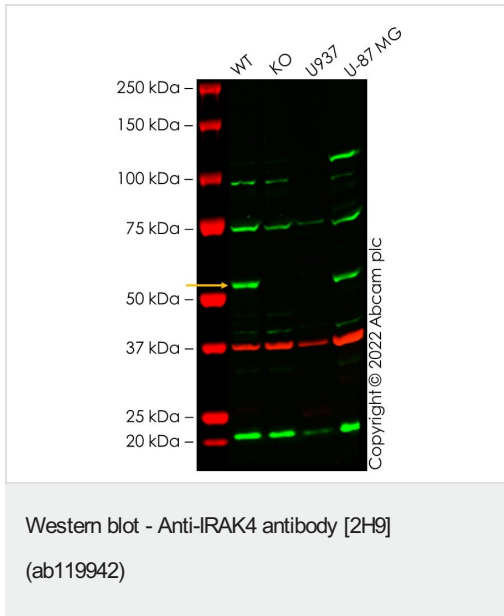
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

| Application | Abreviews | Notes |
|-------------|-----------|--|
| WB | | 1/500 - 1/2000. Predicted molecular weight: 52 kDa. |
| ELISA | | 1/10000. |
| IHC-P | | 1/200 - 1/1000. |
| Flow Cyt | | 1/200 - 1/400. ab170190 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody. |
| ICC/IF | | 1/100. |

Target

| | |
|-------------------------------|---|
| Function | Required for the efficient recruitment of IRAK1 to the IL-1 receptor complex following IL-1 engagement, triggering intracellular signaling cascades leading to transcriptional up-regulation and mRNA stabilization. Phosphorylates IRAK1. |
| Involvement in disease | Defects in IRAK4 are the cause of recurrent isolated invasive pneumococcal disease type 1 (IPD1) [MIM:610799]. Recurrent invasive pneumococcal disease (IPD) is defined as two episodes of IPD occurring at least 1 month apart, whether caused by the same or different serotypes or strains. Recurrent IPD occurs in at least 2% of patients in most series, making IPD the most important known risk factor for subsequent IPD. Defects in IRAK4 are the cause of IRAK4 deficiency (IRAK4D) [MIM:607676]. IRAK4 deficiency causes extracellular pyogenic bacterial and fungal infections in otherwise healthy children. |
| 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



All lanes : Anti-IRAK4 antibody [2H9] (ab119942) at 1/500 dilution

Lane 1 : Wild-type THP-1 cell lysate

Lane 2 : IRAK4 knockout THP-1 cell lysate

Lane 3 : U937 cell lysate

Lane 4 : U-87 MG cell lysate

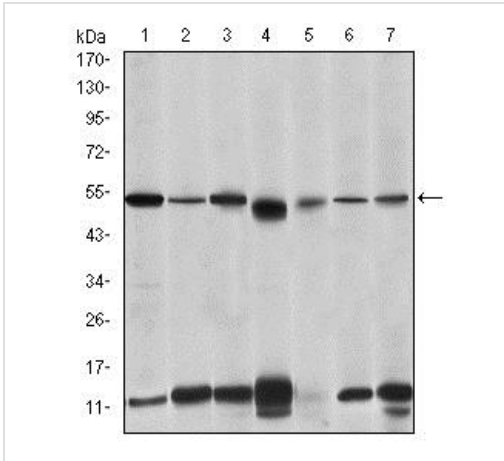
Lysates/proteins at 20 µg per lane.

Performed under reducing conditions.

Predicted band size: 52 kDa

Observed band size: 55 kDa

False colour image of Western blot: Anti-IRAK4 antibody [2H9] staining at 1/500 dilution, shown in green; Rabbit Anti-GAPDH antibody [EPR16891] ([ab181602](#)) loading control staining at 1/20000 dilution, shown in red. In Western blot, ab119942 was shown to bind specifically to IRAK4. A band was observed at 55 kDa in wild-type THP-1 cell lysates with no signal observed at this size in IRAK4 knockout cell line [ab281630](#) (knockout cell lysate [ab282980](#)). To generate this image, wild-type and IRAK4 knockout THP-1 cell lysates were analysed. First, samples were run on an SDS-PAGE gel then transferred onto a nitrocellulose membrane. Membranes were blocked in 3 % milk in TBS-0.1 % Tween[®] 20 (TBS-T) before incubation with primary antibodies overnight at 4 °C. Blots were washed four times in TBS-T, incubated with secondary antibodies for 1 h at room temperature, washed again four times then imaged. Secondary antibodies used were Goat anti-Mouse IgG H&L (IRDye[®] 800CW) preabsorbed ([ab216772](#)) and Goat anti-Rabbit IgG H&L (IRDye[®] 680RD) preabsorbed ([ab216777](#)) at 1/20000 dilution.



Western blot - Anti-IRAK4 antibody [2H9]
(ab119942)

All lanes : Anti-IRAK4 antibody [2H9] (ab119942) at 1/500 dilution

Lane 1 : THP-1 cell lysate

Lane 2 : HeLa cell lysate

Lane 3 : K562 cell lysate

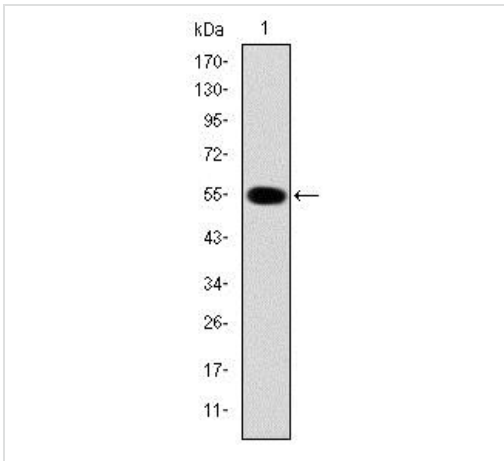
Lane 4 : MCF7 cell lysate

Lane 5 : RAW264.7 cell lysate

Lane 6 : Jurkat cell lysate

Lane 7 : COS-7 (African green monkey kidney fibroblast-like cell line) cell lysate

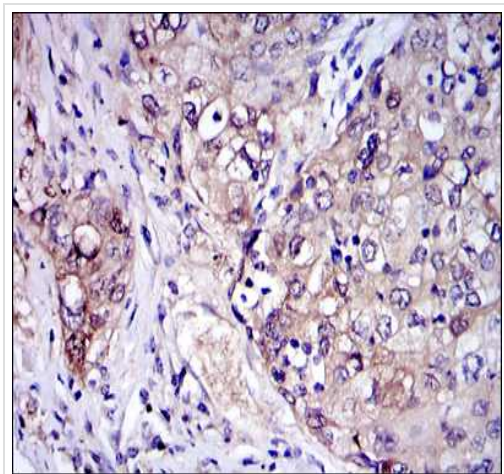
Predicted band size: 52 kDa



Western blot - Anti-IRAK4 antibody [2H9]
(ab119942)

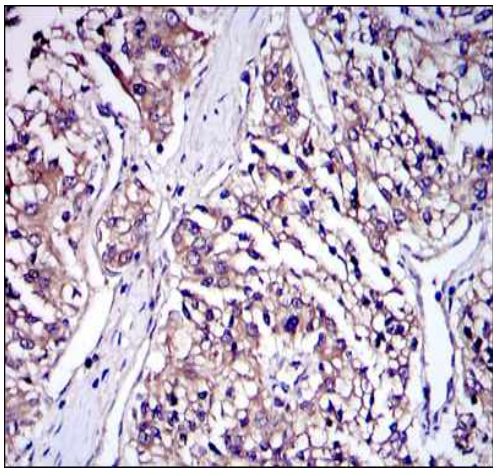
Anti-IRAK4 antibody [2H9] (ab119942) at 1/500 dilution +
Recombinant IRAK4 protein

Predicted band size: 52 kDa



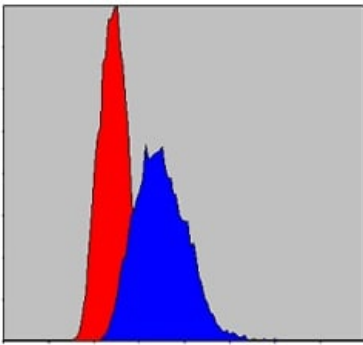
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-IRAK4 antibody [2H9]
(ab119942)

ab119942, at 1/200 dilution, staining IRAK4 in paraffin-embedded Human lung cancer tissue by Immunohistochemistry with DAB staining.



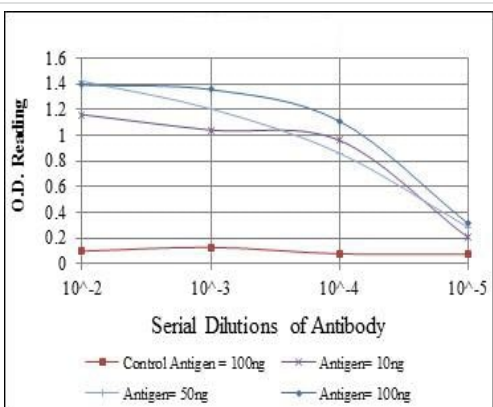
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-IRAK4 antibody [2H9] (ab119942)

ab119942, at 1/200 dilution, staining IRAK4 in paraffin-embedded Human kidney cancer tissue by Immunohistochemistry with DAB staining.



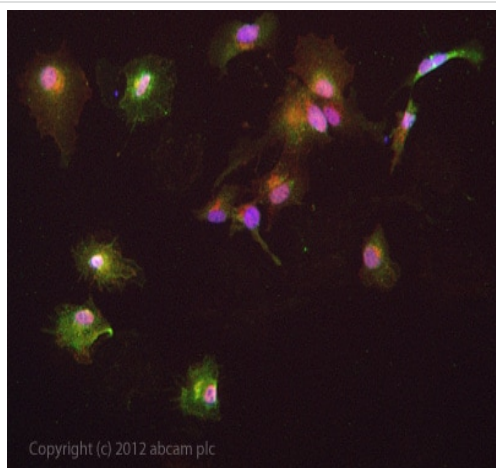
Flow Cytometry - Anti-IRAK4 antibody [2H9] (ab119942)

Flow cytometric analysis of Hela cells using ab119942 at 1/200 dilution (blue) and negative control (red).



ELISA - Anti-IRAK4 antibody [2H9] (ab119942)

ELISA using ab119942.



Immunocytochemistry/ Immunofluorescence - Anti-IRAK4 antibody [2H9] (ab119942)

ab119942 stained HepG2 cells. The cells were 4% formaldehyde fixed (10 min) and then incubated in 1%BSA / 10% normal goat serum / 0.3M glycine in 0.1% PBS-Tween for 1h to permeabilise the cells and block non-specific protein-protein interactions. The cells were then incubated with the antibody ab119942 at 1/100 dilution overnight at +4°C. The secondary antibody (green) was DyLight® 488 goat anti- mouse (**ab96879**) IgG (H+L) used at a 1/1000 dilution for 1h. Alexa Fluor® 594 WGA was used to label plasma membranes (red) at a 1/200 dilution for 1h. DAPI was used to stain the cell nuclei (blue) at a concentration of 1.43µM.

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