

Product datasheet

Anti-IRAK-1 antibody [EPR18630] ab180747

KO VALIDATED

Recombinant

RabMAb

[3 References](#) [4 Images](#)

Overview

Product name	Anti-IRAK-1 antibody [EPR18630]
Description	Rabbit monoclonal [EPR18630] to IRAK-1
Host species	Rabbit
Tested applications	Suitable for: WB, IP Unsuitable for: ICC/IF
Species reactivity	Reacts with: Human
Immunogen	Recombinant fragment. This information is proprietary to Abcam and/or its suppliers.
Positive control	WB: HEK-293, Jurkat, K562 and HeLa whole cell lysates. ICC/IF: HeLa and K562 cells. IP: HEK-293 whole cell lysate.
General notes	<p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none"> - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply - Animal-free production <p>For more information see here.</p> <p>Our RabMAb[®] technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb[®] patents.</p>

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 long term. Avoid freeze / thaw cycle.
Storage buffer	Preservative: 0.01% Sodium azide Constituents: 59% PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR18630
Isotype	IgG

Applications

The Abpromise guarantee

Our **Abpromise guarantee** covers the use of ab180747 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		1/1000. Detects a band of approximately 77 kDa (predicted molecular weight: 77 kDa).
IP		1/100.

Application notes

Is unsuitable for ICC/IF.

Target

Function

Binds to the IL-1 type I receptor following IL-1 engagement, triggering intracellular signaling cascades leading to transcriptional up-regulation and mRNA stabilization. Isoform 1 binds rapidly but is then degraded allowing isoform 2 to mediate a slower, more sustained response to the cytokine. Isoform 2 is inactive suggesting that the kinase activity of this enzyme is not required for IL-1 signaling. Once phosphorylated, IRAK1 recruits the adapter protein PELI1.

Tissue specificity

Isoform 1 and isoform 2 are ubiquitously expressed in all tissues examined, with isoform 1 being more strongly expressed than isoform 2.

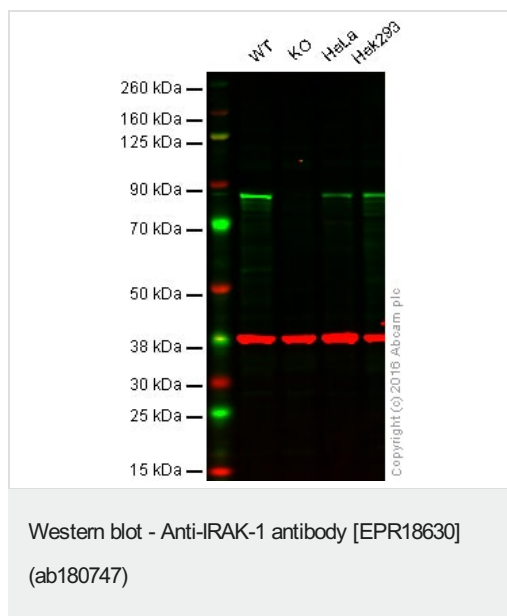
Sequence similarities

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

Post-translational modifications

Autophosphorylated or is transphosphorylated by IRAK4 following recruitment to the IL-1RI. In the case of isoform 1, this is linked to ubiquitination and degradation. Polyubiquitinated; after cell stimulation with IL-1-beta. Polyubiquitination occurs with polyubiquitin chains linked through 'Lys-63'.

Images



Lane 1: Wild type HAP1 whole cell lysate (20 µg)

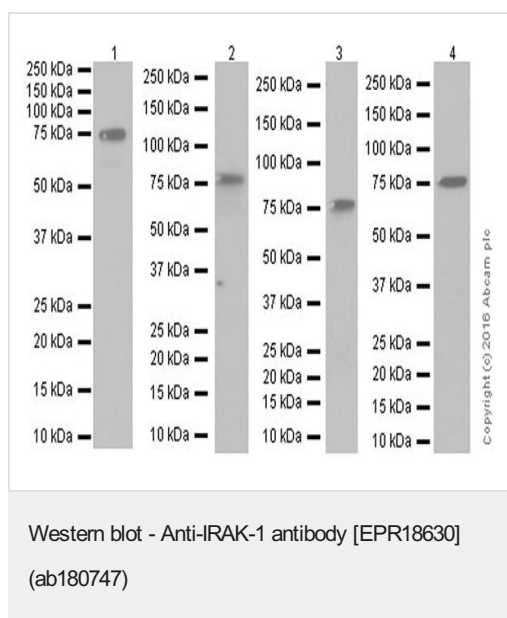
Lane 2: IRAK-1 knockout HAP1 whole cell lysate (20 µg)

Lane 3: HeLa whole cell lysate (20 µg)

Lane 4: Hek293 whole cell lysate (20 µg)

Lanes 1 - 4: Merged signal (red and green). Green - ab180747 observed at 85 kDa. Red - loading control, [ab8245](#), observed at 37 kDa.

ab180747 was shown to specifically react with IRAK-1 when IRAK-1 knockout samples were used. Wild-type and IRAK-1 knockout samples were subjected to SDS-PAGE. Ab180747 and [ab8245](#) (Mouse anti GAPDH loading control) were incubated overnight at 4°C at 1/1000 dilution and 1/10000 dilution respectively. Blots were developed with 800CW Goat anti-Rabbit and 680CW Goat anti-Mouse secondary antibodies at 1/10000 dilution for 1 hour at room temperature before imaging.



All lanes : Anti-IRAK-1 antibody [EPR18630] (ab180747) at 1/1000 dilution

Lane 1 : HEK-293 (Human epithelial cell line from embryonic kidney) whole cell lysate

Lane 2 : Jurkat (Human T cell leukemia cell line from peripheral blood) whole cell lysate

Lane 3 : K562 (Human chronic myelogenous leukemia cell line from bone marrow) whole cell lysate

Lane 4 : HeLa (Human epithelial cell line from cervix adenocarcinoma) whole cell lysate

Lysates/proteins at 10 µg per lane.

Secondary

All lanes : Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) at 1/100000 dilution

Predicted band size: 77 kDa

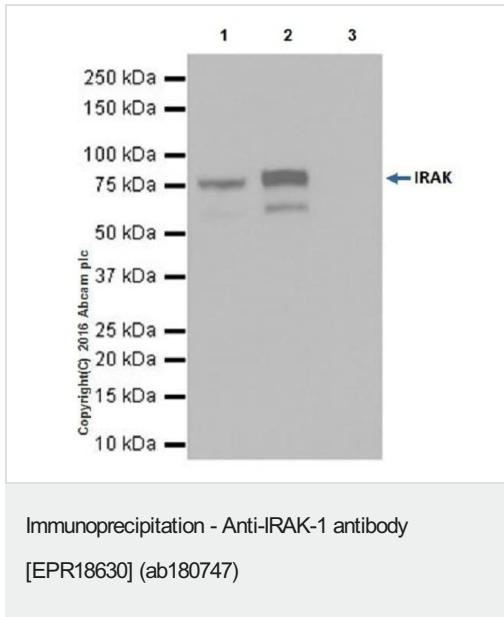
Observed band size: 77 kDa

Blocking/Dilution buffer: 5% NFDM/TBST.

Exposure time: Lane 1: 10 seconds; Lane 2: 3 minutes; Lane 3: 30 seconds; Lane 4: 1 minute.

There are two splice variants for IRAK-1, IRAK-1b and IRAK-1c,

respectively. The product recognizes full length IRAK-1 (80kDa).



IRAK-1 was immunoprecipitated from 0.35 mg of HEK-293 (Human epithelial cell line from embryonic kidney) whole cell lysate with ab180747 at 1/100 dilution. Western blot was performed from the immunoprecipitate using ab180747 at 1/1000 dilution. VeriBlot for IP Detection Reagent (HRP) ([ab131366](#)), was used for detection at 1/1000 dilution.

Lane 1: HEK-293 whole cell lysate 10µg (Input).

Lane 2: ab180747 IP in HEK-293 whole cell lysate.

Lane 3: Rabbit monoclonal IgG ([ab172730](#)) instead of ab180747 in HEK-293 whole cell lysate.

Blocking and dilution buffer and concentration: 5% NFDM/TBST.

Exposure time: 30 seconds.

The 68kDa band observed is likely a splice variant, according to PMID: 16690127.

Why choose a recombinant antibody?

- Research with confidence
Consistent and reproducible results
- Long-term and scalable supply
Recombinant technology
- Success from the first experiment
Confirmed specificity
- Ethical standards compliant
Animal-free production

Anti-IRAK-1 antibody [EPR18630] (ab180747)

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

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