

Anti-IRAK4 Antibody [JE41-77]

HA721347



Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human, Mouse, Monkey
Applications:	WB, IHC-P
Molecular Wt:	Predicted band size: 52 kDa
Clone number:	JE41-77

Description: Serine/threonine-protein kinase that plays a critical role in initiating innate immune response against foreign pathogens. Involved in Toll-like receptor (TLR) and IL-1R signaling pathways. Is rapidly recruited by MYD88 to the receptor-signaling complex upon TLR activation to form the Myddosome together with IRAK2. Phosphorylates initially IRAK1, thus stimulating the kinase activity and intensive autophosphorylation of IRAK1. Phosphorylates E3 ubiquitin ligases Pellino proteins (PELI1, PELI2 and PELI3) to promote pellino-mediated polyubiquitination of IRAK1. Then, the ubiquitin-binding domain of IKBKG/NEMO binds to polyubiquitinated IRAK1 bringing together the IRAK1-MAP3K7/TAK1-TRAF6 complex and the NEMO-IKKA-IKKB complex. In turn, MAP3K7/TAK1 activates IKKs (CHUK/IKKA and IKBKB/IKKB) leading to NF-kappa-B nuclear translocation and activation. Alternatively, phosphorylates TIRAP to promote its ubiquitination and subsequent degradation. Phosphorylates NCF1 and regulates NADPH oxidase activation after LPS stimulation suggesting a similar mechanism during microbial infections.

Immunogen: Synthetic peptide within Human IRAK4 aa 1-100 (N terminal).

Positive control: Jurkat cell lysate, K-562 cell lysate, THP-1 cell lysate, RAW264.7 cell lysate, COS-1 cell lysate, HL-60 cell lysate, human skeletal muscle tissue.

Subcellular location: Cytoplasm.

Database links: SwissProt: Q9NWZ3 Human | Q8R4K2 Mouse

Recommended Dilutions:

WB	1:1,000-1:2,000
IHC-P	1:1,000

Storage Buffer: 1*TBS (pH7.4), 0.05% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.

Storage Instruction: Shipped at 4°C. Store at +4°C short term (1-2 weeks). It is recommended to aliquot into single-use upon delivery. Store at -20°C long term.

Purity: Protein A affinity purified.

Hangzhou Huaan Biotechnology Co., Ltd.

Orders:0086-571-88062880

Technical:0086-571-89986345

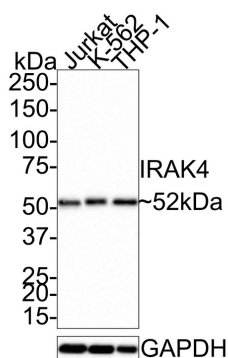
Service mail:support@huabio.cn

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Images

Fig1: Western blot analysis of IRAK4 on different lysates with Rabbit anti-IRAK4 antibody (HA721347) at 1/1,000 dilution.

Lane 1: Jurkat cell lysate
Lane 2: K-562 cell lysate
Lane 3: THP-1 cell lysate



Lysates/proteins at 10 µg/Lane.

Predicted band size: 52 kDa
Observed band size: 52 kDa

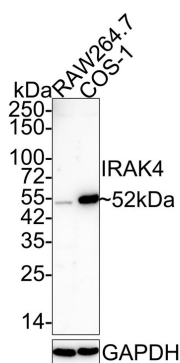
Exposure time: 22 seconds;

4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (HA721347) at 1/1,000 dilution was used in 5% NFDM/TBST at room temperature for 2 hours. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1:200,000 dilution was used for 1 hour at room temperature.

Fig2: Western blot analysis of IRAK4 on different lysates with Rabbit anti-IRAK4 antibody (HA721347) at 1/1,000 dilution.

Lane 1: RAW264.7 cell lysate
Lane 2: COS-1 cell lysate



Lysates/proteins at 20 µg/Lane.

Predicted band size: 52 kDa
Observed band size: 52 kDa

Exposure time: 5 minutes;

4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (HA721347) at 1/1,000 dilution was used in 5% NFDM/TBST at 4°C overnight. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1/50,000 dilution was used for 1 hour at room temperature.

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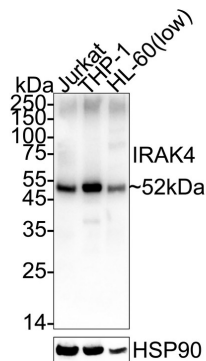
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Fig3: Western blot analysis of IRAK4 on different lysates with Rabbit anti-IRAK4 antibody (HA721347) at 1/2,000 dilution.

Lane 1: Jurkat cell lysate

Lane 2: THP-1 cell lysate

Lane 3: HL-60 cell lysate (low expression)



Lysates/proteins at 20 µg/Lane.

Predicted band size: 52 kDa

Observed band size: 52 kDa

Exposure time: 25 seconds; ECL: K1801;

4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (HA721347) at 1/2,000 dilution was used in primary antibody dilution (K1803) at 4°C overnight. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1/50,000 dilution was used for 1 hour at room temperature.

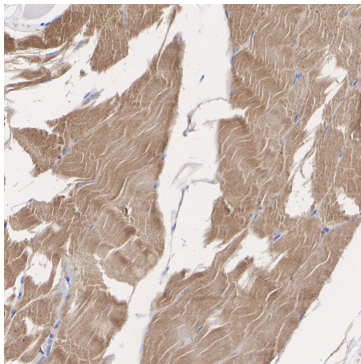


Fig4: Immunohistochemical analysis of paraffin-embedded human skeletal muscle tissue with Rabbit anti-IRAK4 antibody (HA721347) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH₂O and PBS, and then probed with the primary antibody (HA721347) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

Note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".

Background References

1. Somani VK et al. IRAK4 Signaling Drives Resistance to Checkpoint Immunotherapy in Pancreatic Ductal Adenocarcinoma. *Gastroenterology*. 2022 Jun
2. Bennett J et al. IRAK1 and IRAK4 as emerging therapeutic targets in hematologic malignancies. *Curr Opin Hematol*. 2022 Jan

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