

## Anti-IRAK-4 Antibody

Catalog Number: A01247-1

### About IRAK4

Interleukin-1 (IL-1) and lipopolysaccharide (LPS) induces cellular responses through IL-1 receptor (IL-1R) and Toll-like receptors (TLR). IL-1R-associated kinases (IRAK, IRAK2, and IRAK-M) regulate the activation of NF-kappaB and MAP kinase (MAPK) by IL-1R/TLR. A novel member in the IRAK/Pelle family was recently identified and designated IRAK-4. Overexpression of IRAK-4 activates NF-kappaB and MAPK pathways. IRAK-4 interacts with and phosphorylates IRAK-1. IRAK-4-deficient animals are completely resistant to the challenge with LPS. Animals and humans lacking IRAK-4 are impaired in their responses to viral and bacterial challenges. Members in IRAK/Pelle family play a central role in IL-1R/TLR mediated inflammatory responses and in innate immunity.

### Overview

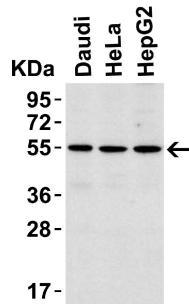
Product Name	Anti-IRAK-4 Antibody
Reactive Species	Human
Description	Boster Bio Anti-IRAK-4 Antibody (Catalog # A01247-1). Tested in ELISA, WB, ICC, IF applications. This antibody reacts with Human.
Application	ELISA, IF, ICC, WB
Clonality	Polyclonal
Formulation	IRAK-4 Antibody is supplied in PBS containing 0.02% sodium azide.
Storage Instructions	IRAK-4 antibody can be stored at 4°C for three months and -20°C, stable for up to one year. Avoid repeated freeze-thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
Host	Rabbit
Uniprot ID	Q9NWZ3

### Technical Details

Immunogen	Anti-IRAK4 antibody was raised against a peptide corresponding to 13 amino acids near the carboxy terminus of human IRAK4. The immunogen is located within the last 50 amino acids of IRAK4.
Predicted Reactive Species	Bovine, Mouse, Rat
Cross Reactivity	IRAK-4 antibody is predicted to not cross-react with other members of the IRAK protein family.
Isotype	IgG
Form	Liquid
Concentration	1 mg/mL

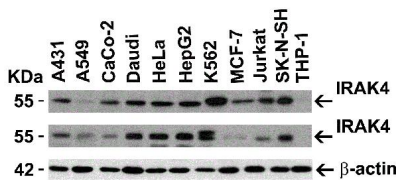
Purification	IRAK-4 Antibody is affinity chromatography purified via peptide column.
Suggested Dilutions	<p>Dilute the sample so that the expected range of concentrations fall within the detection range of this kit.</p> <p>If the expected range of concentration is unknown, a pilot test should be conducted to decide the optimal dilution ratio for your samples.</p> <p>Some PubMed article(s) citing the expression level of this target are as follows:</p> <p>Boster Bio's internal QC testing used:</p> <p>WB: 1-4 ug/mL; ICC: 10 ug/mL; IF: 10 ug/mL.</p> <p>Antibody validated: Western Blot in human samples; Immunocytochemistry in human samples and Immunofluorescence in human samples. All other applications and species not yet tested. Optimal dilutions for each application should be determined by the researcher.</p>

## Anti-IRAK-4 Antibody (A01247-1) Images



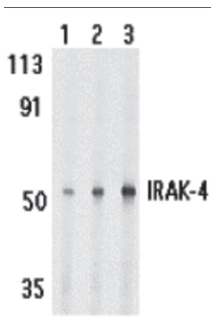
### Western Blot Validation in Human Cell Lines

Loading: 15 ug/ of lysates per lane. Antibodies: IRAK4 A01247-1 (1 ug/mL), 1h incubation at RT in 5% NFDm/TBST. Secondary: Goat anti-rabbit IgG HRP conjugate at 1:10000 dilution.



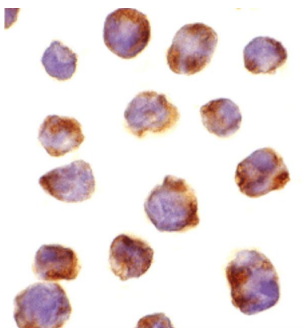
### Independent Antibody Validation (IAV) via Protein Expression Profile in Cell Lines

Loading: 15 ug of lysates per lane. Antibodies: IRAK4-A01247-1 (1 ug/mL), IRAK4 (1 ug/mL), beta-actin (1.5 ug/mL), 1h incubation at RT in 5% NFDm/TBST. Secondary: Goat anti-rabbit IgG HRP conjugate at 1:10000 dilution.



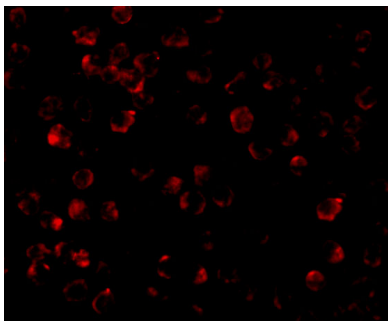
### Western Blot Validation in Human HeLa Cell Lines

Loading: 15 ug of lysates per lane. Antibodies: IRAK4 A01247-1, 1h incubation at RT in 5% NFDm/TBST. Secondary: Goat anti-rabbit IgG HRP conjugate at 1:10000 dilution. Lane 1: 1 ug/mL Lane 2: 2 ug/mL Lane 3: 4 ug/mL



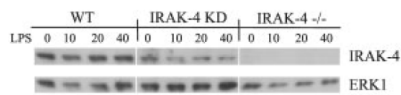
### Immunocytochemistry Validation of IRAK4 in K562 Cells

Immunocytochemical analysis of K562 cells using anti-IRAK4 antibody (A01247-1) at 10 ug/ml. Cells were fixed with formaldehyde and blocked with 10% serum for 1 h at RT; antigen retrieval was by heat mediation with a citrate buffer (pH6). Samples were incubated with primary antibody overnight at 4° C. A goat anti-rabbit IgG H&L (HRP) at 1/250 was used as secondary. Counter stained with Hematoxylin.

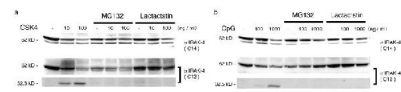


### Immunofluorescence Validation of IRAK4 in K562 Cells

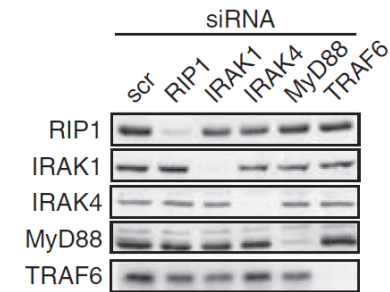
Immunofluorescent analysis of 4% paraformaldehyde-fixed K562 Cells labeling IRAK4 with A01247-1 at 10 ug/mL, followed by goat anti-rabbit IgG secondary antibody at 1/500 dilution (red).



KO and KD Validation of IRAK4 in Mouse Bone Marrow-derived Macrophages (BMDM) (Koziczak-Holbro et al.



Regulated Expression Validation of IRAK4 in Mouse RAW 264 Cells (Hatao et al.



KD Validation of IRAK4 in HEK293T Cells (Heinz et al.

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