

**Anti-IRAK4 Antibody**  
Catalog # ABO11245**Specification**

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**Anti-IRAK4 Antibody - Product Information**

Application	WB
Primary Accession	<a href="#">O9NWZ3</a>
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized

**Description**

Rabbit IgG polyclonal antibody for Interleukin-1 receptor-associated kinase 4(IRAK4) detection. Tested with WB in Human;Mouse;Rat.

**Reconstitution**

Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

**Anti-IRAK4 Antibody - Additional Information**

**Gene ID** 51135

**Other Names**

Interleukin-1 receptor-associated kinase 4, IRAK-4, 2.7.11.1, Renal carcinoma antigen NY-REN-64, IRAK4

**Calculated MW**

51530 MW KDa

**Application Details**

Western blot, 0.1-0.5 µg/ml, Human, Mouse, Rat<br>

**Subcellular Localization**

Cytoplasm .

**Protein Name**

Interleukin-1 receptor-associated kinase 4

**Contents**

Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na<sub>2</sub>HPO<sub>4</sub>, 0.05mg Thimerosal, 0.05mg NaN<sub>3</sub>.

**Immunogen**

A synthetic peptide corresponding to a sequence at the N-terminus of human IRAK4(45-59aa DDRYNQFHIRRFEAL), identical to the related rat and mouse sequences.

**Purification**

Immunogen affinity purified.

**Cross Reactivity**

No cross reactivity with other proteins

Storage

**At -20°C for one year. After r°Constitution, at 4°C for one month. It°Can also be aliquotted and stored frozen at -20°C for a longer time.Avoid repeated freezing and thawing.**

#### Sequence Similarities

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

### Anti-IRAK4 Antibody - Protein Information

**Name** IRAK4

#### Function

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 (PubMed:<a href="http://www.uniprot.org/citations/17878374" target="\_blank">17878374</a>). 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.

#### Cellular Location

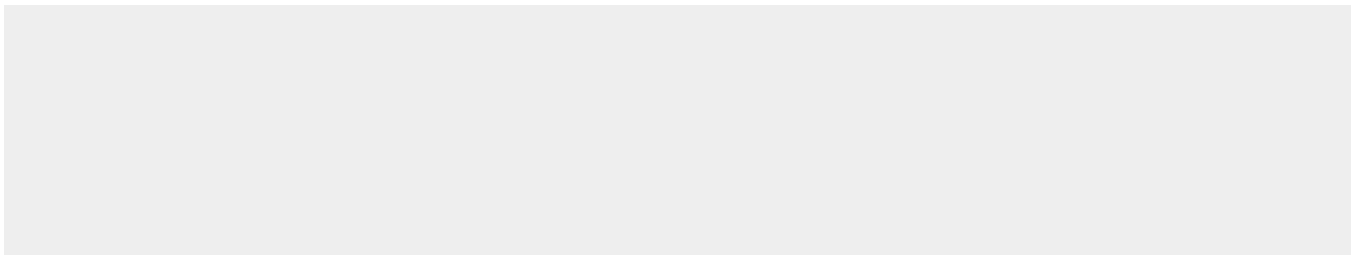
Cytoplasm.

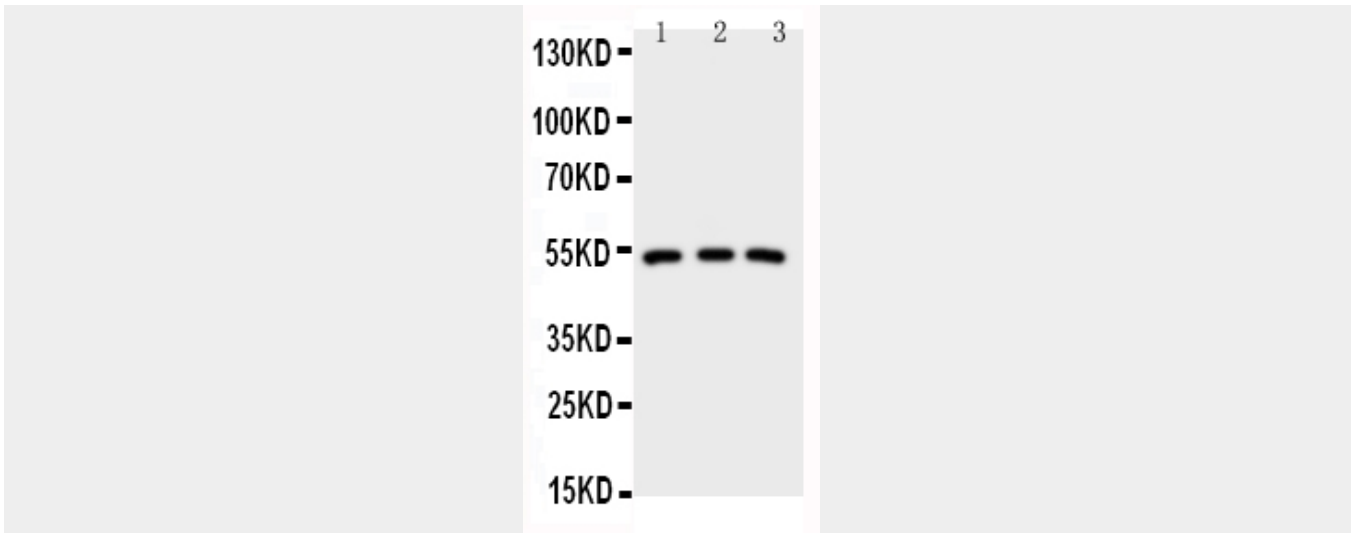
### Anti-IRAK4 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

### Anti-IRAK4 Antibody - Images





Anti-IRAK4 antibody, ABO11245, Western blotting Lane 1: HELA Cell Lysate Lane 2: U87 Cell Lysate Lane 3: MCF-7 Cell Lysate

#### **Anti-IRAK4 Antibody - Background**

IRAK-4(interleukin-1 receptor-associated kinase 4), also called REN64, in the IRAK family, is a protein kinase involved in signaling innate immune responses from Toll-like receptors. It also supports signaling from T-cell receptors. Scott(2002) mapped the REN64/IRAK4 gene to chromosome 12 based on similarity between the REN64 sequence(GenBank AF155118) and a chromosome 12 clone(GenBank AC093012). Functional analysis by Li et al.(2002) determined that IRAK4, like IRAK1 and Pelle, has auto- and cross-phosphorylation kinase activity. Precipitation and binding analyses showed weak interaction between IRAK4 and IRAK1, but IRAK4 did not interact with other IRAK family members. Overexpressed IRAK4 interacted with MYD88 and TRAF6 and activated mitogen-activated protein kinase(MAPK) and nuclear factor kappa-B(NFKB) pathways.