

**Anti-IRAK Picoband Antibody**  
Catalog # ABO12914**Specification****Anti-IRAK Picoband Antibody - Product Information**

Application	WB
Primary Accession	<a href="#">P51617</a>
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized

**Description**

Rabbit IgG polyclonal antibody for IRAK detection. Tested with WB, Direct ELISA in Human;Mouse;Rat.

**Reconstitution**

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

**Anti-IRAK Picoband Antibody - Additional Information**

Gene ID 3654

**Other Names**

Interleukin-1 receptor-associated kinase 1, IRAK-1, 2.7.11.1, IRAK1, IRAK

**Application Details**

Western blot, 0.1-0.5 µg/ml  
Direct ELISA, 0.1-0.5 µg/ml

**Subcellular Localization**

Cytoplasm.

**Tissue Specificity**

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

**Contents**

Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na<sub>2</sub>HPO<sub>4</sub>, 0.05mg Na<sub>3</sub>.

**Immunogen**

E. coli-derived human IRAK recombinant protein (Position: M377-D479).

**Cross Reactivity**

No cross reactivity with other proteins.

**Storage**

At -20°C; for one year. After reconstitution, 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.

## Anti-IRAK Picoband Antibody - Protein Information

Name IRAK1 ([HGNC:6112](#))

Synonyms IRAK

### 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. Is rapidly recruited by MYD88 to the receptor-signaling complex upon TLR activation. Association with MYD88 leads to IRAK1 phosphorylation by IRAK4 and subsequent autophosphorylation and kinase activation. 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 the interferon regulatory factor 7 (IRF7) to induce its activation and translocation to the nucleus, resulting in transcriptional activation of type I IFN genes, which drive the cell in an antiviral state. When sumoylated, translocates to the nucleus and phosphorylates STAT3.

### Cellular Location

Cytoplasm. Nucleus. Lipid droplet Note=Translocates to the nucleus when sumoylated. RSAD2/viperin recruits it to the lipid droplet (By similarity).

### Tissue Location

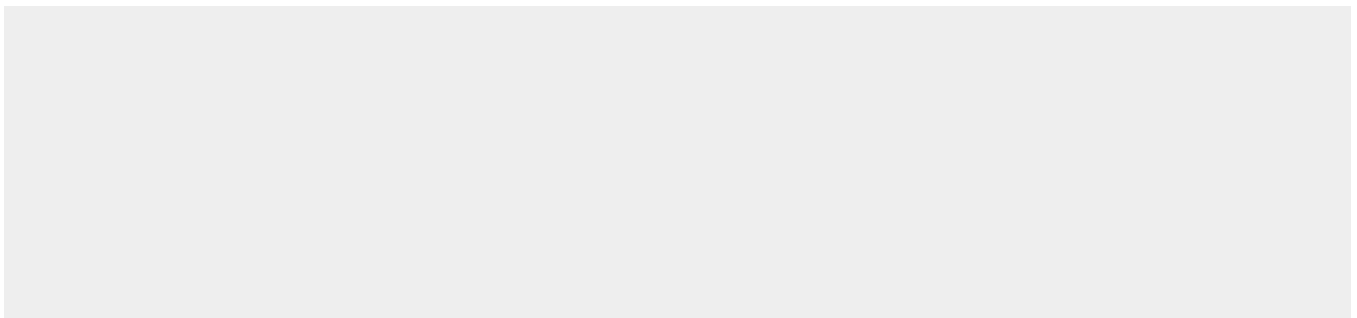
Isoform 1 and isoform 2 are ubiquitously expressed in all tissues examined, with isoform 1 being more strongly expressed than isoform 2.

## Anti-IRAK Picoband 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-IRAK Picoband Antibody - Images



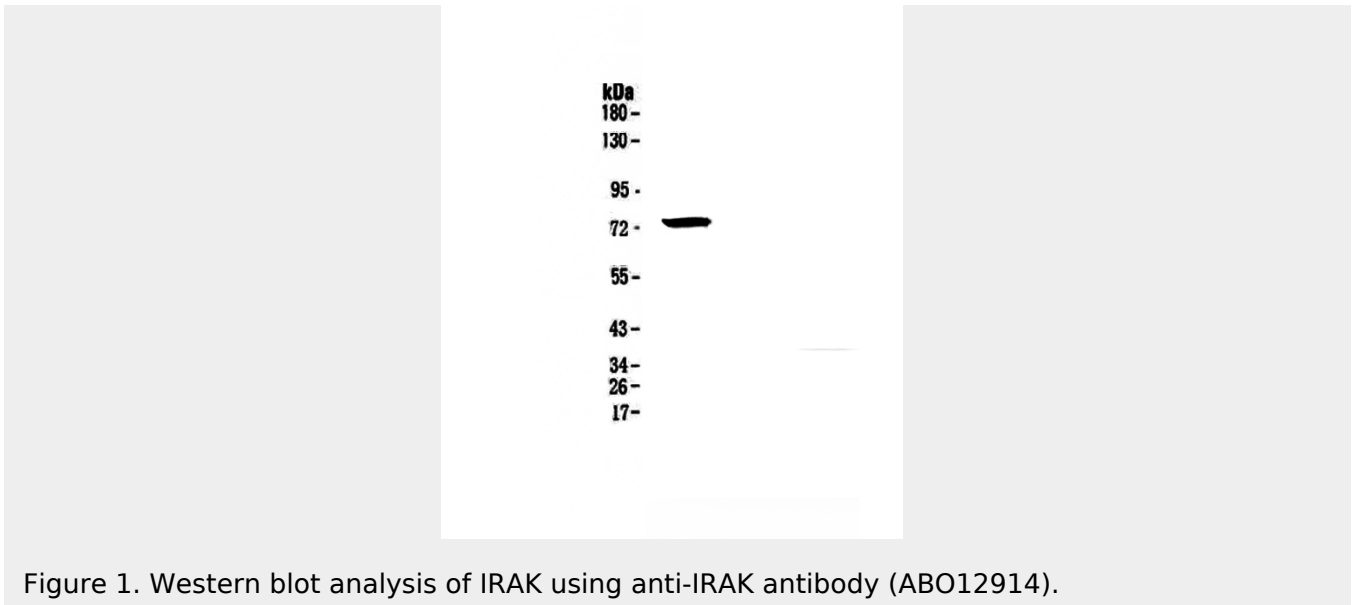


Figure 1. Western blot analysis of IRAK using anti-IRAK antibody (ABO12914).

#### **Anti-IRAK Picoband Antibody - Background**

Interleukin-1 receptor-associated kinase 1, also called IRAK1, is an enzyme that in humans is encoded by the IRAK1 gene. By radiation hybrid analysis, this gene is mapped to chromosome Xq28. Serine/threonine-protein kinase plays a critical role in initiating innate immune response against foreign pathogens. This gene involved in Toll-like receptor (TLR) and IL-1R signaling pathways. This gene encodes the interleukin-1 receptor-associated kinase 1, one of two putative serine/threonine kinases that become associated with the interleukin-1 receptor (IL1R) upon stimulation. This gene is partially responsible for IL1-induced upregulation of the transcription factor NF-kappa B.