

**Anti-IRAK1 Antibody**  
**Rabbit polyclonal antibody to IRAK1**  
**Catalog # AP61292****Specification**

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**Anti-IRAK1 Antibody - Product Information**

Application	WB, IHC
Primary Accession	<a href="#">P51617</a>
Other Accession	<a href="#">Q62406</a>
Reactivity	Human, Mouse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	76537

**Anti-IRAK1 Antibody - Additional Information****Gene ID** 3654**Other Names**

IRAK; Interleukin-1 receptor-associated kinase 1; IRAK-1

**Target/Specificity**

Recognizes endogenous levels of IRAK1 protein.

**Dilution**

WB~~WB (1/500 - 1/1000), IH (1/50 - 1/200)

IHC~~1:100~500

**Format**

Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.09% (W/V) sodium azide.

**Storage**

Store at -20 °C. Stable for 12 months from date of receipt

**Anti-IRAK1 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

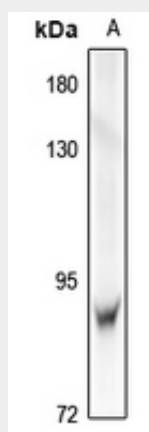
Isoform 1 and isoform 2 are ubiquitously expressed in all tissues examined, with isoform 1 being more strongly expressed than isoform 2.

### Anti-IRAK1 Antibody - Protocols

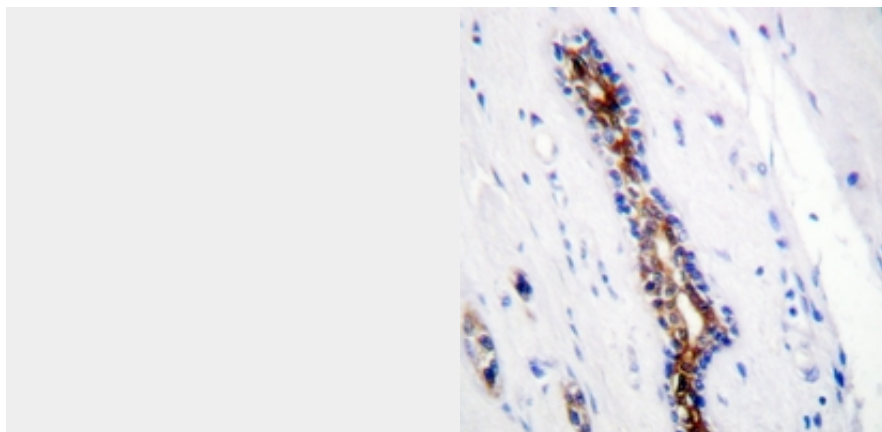
Provided below are standard protocols that you may find useful for product applications.

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

### Anti-IRAK1 Antibody - Images



Western blot analysis of IRAK1 expression in mouse embryo (A) whole cell lysates.



Immunohistochemical analysis of IRAK1 staining in human breast cancer formalin fixed paraffin embedded tissue section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0). The section was then incubated with the antibody at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

#### **Anti-IRAK1 Antibody - Background**

KLH-conjugated synthetic peptide encompassing a sequence within the center region of human IRAK1. The exact sequence is proprietary.