

# IRAK1 Recombinant antibody

Catalog Number: 86068-3-RR

## Basic Information

**Catalog Number:**

86068-3-RR

**Concentration:**

1000 µg/ml

**Source:**

Rabbit

**Isotype:**

IgG

**Immunogen Catalog Number:**

AG0728

**GenBank Accession Number:**

BC014963

**GeneID (NCBI):**

3654

**UNIPROT ID:**

P51617

**Full Name:**interleukin-1 receptor-associated  
kinase 1**Calculated MW:**

77 kDa

**Observed MW:**

68-80 kDa

**Purification Method:**

Protein A purification

**CloneNo.:**

250691C5

**Recommended Dilutions:**

WB: 1:2000-1:10000

## Applications

**Tested Applications:**

WB, ELISA

**Species Specificity:**

human, rat

**Positive Controls:**WB : HeLa cells, PC-12 cells, HEK-293 cells, A549 cells,  
MCF-7 cells, Jurkat cells

## Background Information

Interleukin-1 receptor-associated kinases (IRAKs) are a unique family of death domain containing protein kinases that play a key role in initiating innate immune response against foreign pathogens. They are involved in Toll-like receptor (TLR) and interleukin-1 receptor (IL-1R) signaling pathways. IRAK1 is the first member of this kinase family. Upon ligand binding to TLR/IL-1R, IRAK1 is recruited by MYD88 to the receptor-signaling complex, the association leads to IRAK1 phosphorylation by IRAK4 and subsequent autophosphorylation and kinase activation. Hyper-phosphorylated IRAK1 then disengages from the receptor complex, and forms a cytosolic IRAK1-TRAF6 complex. TRAF6 then interacts with TAK and TAB, resulting in eventual activation of the NF- $\kappa$ B and MAPK pathways. Phosphorylated IRAK1 also undergoes ubiquitin-mediated degradation or sumoylation, which results in nuclear translocation and transcriptional activation of inflammatory target genes. (PMID: 17890055; 12620219)

## Storage

**Storage:**

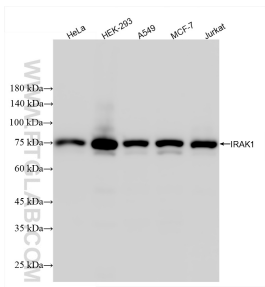
Store at -20°C. Stable for one year after shipment.

**Storage Buffer:**

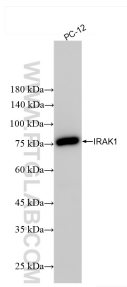
PBS with 0.02% sodium azide and 50% glycerol, pH7.3

Aliquoting is unnecessary for -20°C storage

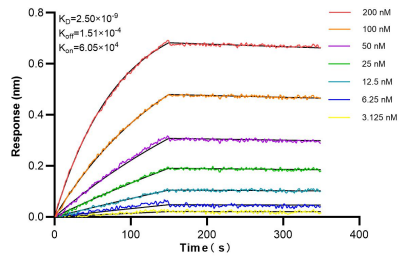
## Selected Validation Data



Various lysates were subjected to SDS PAGE followed by western blot with 86068-3-RR (IRAK1 antibody) at dilution of 1:5000 incubated at room temperature for 1.5 hours.



PC-12 cells were subjected to SDS PAGE followed by western blot with 86068-3-RR (IRAK1 antibody) at dilution of 1:5000 incubated at room temperature for 1.5 hours.



Biolayer interferometry (BLI) kinetic assays of 86068-3-RR against Human IRAK1 were performed. The affinity constant is 2.50 nM.