

For Research Use Only

# IRAK1 Monoclonal antibody

Catalog Number: 66653-1-Ig

Featured Product

3 Publications



## Basic Information

Catalog Number:

66653-1-Ig

Size:

1440 µg/ml

Source:

Mouse

Isotype:

IgG2a

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:

80 kDa

Purification Method:

Protein A purification

CloneNo.:

1H10A7

Recommended Dilutions:

WB 1:2000-1:10000

IHC 1:250-1:1000

## Applications

Tested Applications:

IHC, WB, ELISA

Cited Applications:

IF, IHC

Species Specificity:

Human

Cited Species:

human

**Note-IHC: suggested antigen retrieval with TE buffer pH 9.0; (\*) Alternatively, antigen retrieval may be performed with citrate buffer pH 6.0**

Positive Controls:

WB : HeLa cells, HEK-293 cells, MCF-7 cells, Jurkat cells

IHC : human lung cancer tissue,

## 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)

## Notable Publications

Author	Pubmed ID	Journal	Application
Gang Xu	33664485	Cell Mol Immunol	IF
Xiaoli Zhang	37676254	Biol Reprod	IHC
Jing Li	37031183	Cell Death Dis	IF

## Storage

Storage:

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

Storage Buffer:

PBS with 0.02% sodium azide and 50% glycerol pH 7.3.

Aliquoting is unnecessary for -20°C storage

For technical support and original validation data for this product please contact:

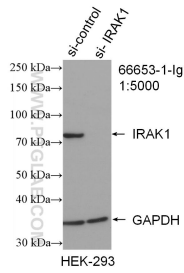
T: 4006900926

E: Proteintech-CN@ptglab.com

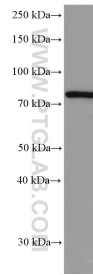
W: ptgcn.com

**This product is exclusively available under Proteintech Group brand and is not available to purchase from any other manufacturer.**

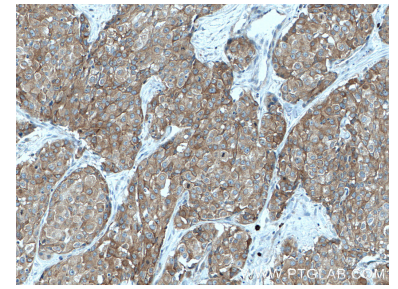
## Selected Validation Data



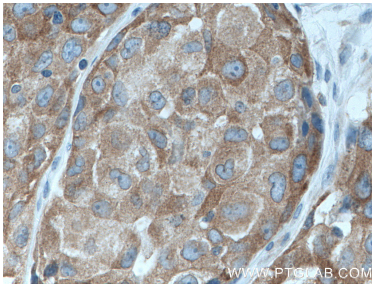
WB result of IRAK1 antibody (66653-1-Ig; 1:5000; incubated at room temperature for 1.5 hours) with sh-Control and sh-IRAK1 transfected HEK-293 cells.



HeLa cells were subjected to SDS PAGE followed by western blot with 66653-1-Ig (IRAK1 antibody) at dilution of 1:5000 incubated at room temperature for 1.5 hours.



Immunohistochemical analysis of paraffin-embedded human lung cancer tissue slide using 66653-1-Ig (IRAK1 antibody) at dilution of 1:500 (under 10x lens. Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



Immunohistochemical analysis of paraffin-embedded human lung cancer tissue slide using 66653-1-Ig (IRAK1 antibody) at dilution of 1:500 (under 40x lens. Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).