

IRAK1

Polyclonal ANTIBODY

Catalog Number: 10478-2-AP

Featured Product

7 Publications

Basic Information

Catalog Number:
10478-2-AP

Size:
34 µg/150 µl

Source:
Rabbit

Isotype:
IgG

Purification Method:
Antigen affinity purification

Immunogen Catalog Number:
AG0728

GenBank Accession Number:
BC014963

GeneID (NCBI):
3654

Full Name:
interleukin-1 receptor-associated kinase 1

Calculated MW:
77 kDa

Observed MW:
68-80 kDa

Recommended Dilutions:

WB 1:500-1:3000

IP 0.5-4.0 ug for IP and 1:500-1:1000 for WB

IHC 1:50-1:500

IF 1:50-1:500

Applications

Tested Applications:

FC, IF, IHC, IP, WB, ELISA

Cited Applications:

IHC, WB

Species Specificity:

human,mouse,rat

Cited Species:

human, mouse, rat, sheep

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 : A549 cells; PC-13 cells, PC-12 cells, RAW 264.7 cells, HEK-293 cells, HeLa cells, Jurkat cells, K-562 cells, MCF-7 cells

IP : HeLa cells;

IHC : human breast cancer tissue; human lung cancer tissue

IF : HeLa 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-κB 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
Zhongjia Jiang	28553017	Mediators Inflamm	WB
Shuying He	29560749	Artif Cells Nanomed Biotechnol	WB,IHC
Xurong Wu	30850422	Mol Cell Proteomics	WB

Storage

Storage:

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

Storage Buffer:

PBS with 0.1% sodium azide and 50% glycerol pH 7.3.

Aliquoting is unnecessary for -20°C storage

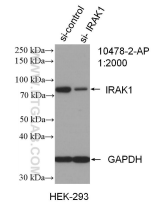
For technical support and original validation data for this product please contact:

T: 1 (888) 4PTGLAB (1-888-478-4522) (toll free in USA), or 1(312) 455-8498 (outside USA)

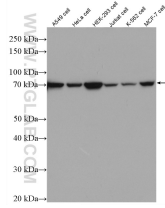
E: proteintech@ptglab.com
W: ptglab.com

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

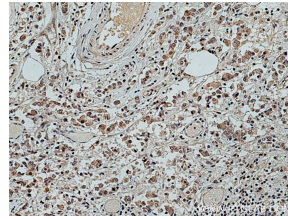
Selected Validation Data



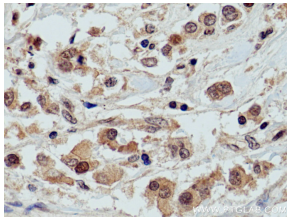
WB result of IRAK1 antibody (10478-2-AP; 1:2000; incubated at room temperature for 1.5 hours) with sh-Control and sh-IRAK1 transfected HEK-293 cells



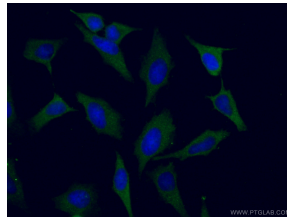
Various lysates were subjected to SDS PAGE followed by western blot with 10478-2-AP (IRAK1 antibody) at dilution of 1:1500 incubated at room temperature for 1.5 hours



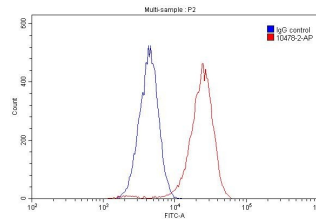
Immunohistochemical analysis of paraffin-embedded human breast cancer tissue slide using 10478-2-AP (IRAK1 antibody) at dilution of 1:200 (under 10x lens), heat mediated antigen retrieved with Tris-EDTA buffer(pH9).



Immunohistochemical analysis of paraffin-embedded human breast cancer tissue slide using 10478-2-AP (IRAK1 antibody) at dilution of 1:200 (under 40x lens), heat mediated antigen retrieved with Tris-EDTA buffer(pH9).



Immunofluorescent analysis of (-20°C Ethanol) fixed HeLa cells using 10478-2-AP (IRAK1 antibody) at dilution of 1:50 and CoralLite488-Conjugated AffiniPure Goat Anti-Rabbit IgG(H+L)



1X10⁶ HeLa cells were stained with 0.20ug IRAK1 antibody (10478-2-AP red) and control antibody (blue). Fixed with 90% MeOH