

IRAK1 Polyclonal antibody

Catalog Number: 10478-2-AP

Featured Product

31 Publications

Basic Information

Catalog Number: 10478-2-AP	GenBank Accession Number: BC014963	Purification Method: Antigen affinity purification
Size: 150ul, Concentration: 750 µg/ml by Nanodrop;	GeneID (NCBI): 3654	Recommended Dilutions: WB 1:500-1:3000 IP 0.5-4.0 µg for 1.0-3.0 mg of total protein lysate IHC 1:300-1:1200 IF 1:50-1:500
Source: Rabbit	Full Name: interleukin-1 receptor-associated kinase 1	
Isotype: IgG	Calculated MW: 77 kDa	
Immunogen Catalog Number: AG0728	Observed MW: 68-80 kDa	

Applications

Tested Applications:
FC, IF, IHC, IP, WB, ELISA

Cited Applications:
IF, IHC, RIP, WB

Species Specificity:
human, mouse, rat

Cited Species:
human, rat, sheep, mouse

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 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. Hyperphosphorylated 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
Yingyin Xu	34552579	Front Microbiol	WB
Xiaoqin Ma	34777686	Oxid Med Cell Longev	WB
Huaqi Zhang	36337656	Front Nutr	WB

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.

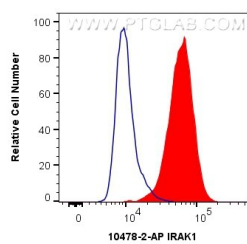
Aliquoting is unnecessary for -20°C storage

*** 20ul sizes contain 0.1% BSA

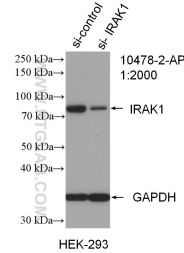
For technical support and original validation data for this product please contact:
T: 1 (888) 4PTGLAB (1-888-478-4522) (toll free in USA), or 1(312) 455-8498 (outside USA)
E: proteintech@ptglab.com
W: ptglab.com

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

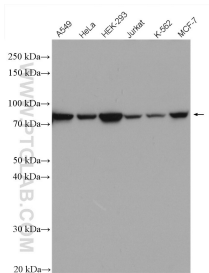
Selected Validation Data



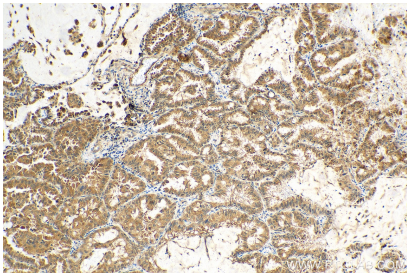
1X10⁶ HeLa cells were intracellularly stained with 0.4 ug Anti-Human IRAK1 (10478-2-AP) and CoraLite®488-Conjugated AffiniPure Goat Anti-Rabbit IgG(H+L) at dilution 1:1000 (red), or 0.4 ug Control Antibody. Cells were fixed with 4% PFA and permeabilized with Flow Cytometry Perm Buffer (PF00011-C).



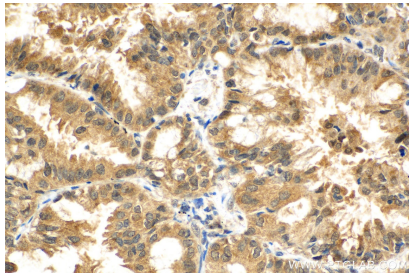
WB result of IRAK1 antibody (10478-2-AP; 1:2000; incubated at room temperature for 1.5 hours) with sh-Control and sh-IRAK1 transfected HEK-293 cells.



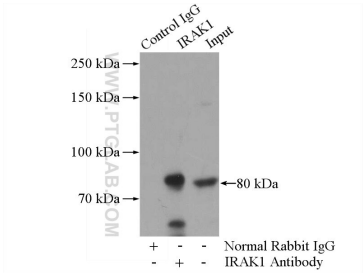
Various lysates were subjected to SDS PAGE followed by western blot with 10478-2-AP (IRAK1 antibody) at dilution of 1:1500 incubated at room temperature for 1.5 hours.



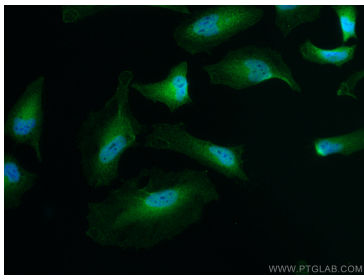
Immunohistochemical analysis of paraffin-embedded human lung cancer tissue slide using 10478-2-AP (IRAK1 antibody) at dilution of 1:600 (under 10x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



Immunohistochemical analysis of paraffin-embedded human lung cancer tissue slide using 10478-2-AP (IRAK1 antibody) at dilution of 1:600 (under 40x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



IP Result of anti-IRAK1 (IP:10478-2-AP, 4ug; Detection:10478-2-AP 1:600) with HeLa cells lysate 2800ug.



Immunofluorescent analysis of (4% PFA) fixed HeLa cells using IRAK1 antibody (10478-2-AP) at dilution of 1:200 and CoraLite®488-Conjugated AffiniPure Goat Anti-Rabbit IgG(H+L), CL555-Phalloidin (orange).