IRAK1 Polyclonal antibody

Catalog Number:10478-2-AP

Featured Product   **40 Publications**

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Basic Information

Catalog Number:
10478-2-AP

Size:
150ul , Concentration: 750 ug/ml by Nanodrop;

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:
Antigen affinity purification

Recommended Dilutions:
WB: 1:500-1:3000
IP: 0.5-4.0 ug for 1.0-3.0 mg of total protein lysate
IHC: 1:300-1:1200
IF/ICC: 1:200-1:800
FC (Intra): 0.40 ug per 10^6 cells in a 100 μl suspension

Applications

Tested Applications:
WB, IHC, IF/ICC, FC (Intra), IP, ELISA

Cited Applications:
WB, IHC, IF, IP, RIP

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 lung cancer tissue, human placenta tissue, mouse ovary tissue, rat intestine, rat ovary tissue

IF/ICC : HeLa cells,

FC (Intra) : 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
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℃. 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
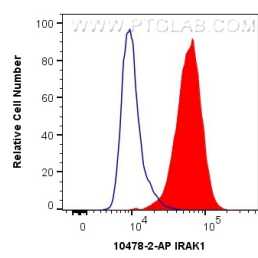
*** 20ul sizes contain 0.1% BSA

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

Selected Validation Data

1X10^6 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).
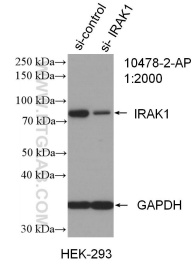

WB result of IRAK1 antibody (10478-2-AP; 1:2000; incubated at room temperature for 1.5 hours) with sh-Control and sh-IRAK1 transfected HEK-293 cells.
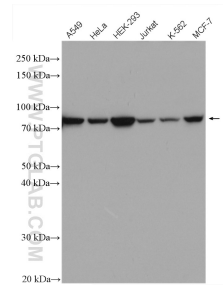

Various lysates were subjected to SDS PAGE followed by western blot with 10478-2-AP (IRAK1 antibody) at dilution of 1:1500 incubated at room temperature for 1.5 hours.
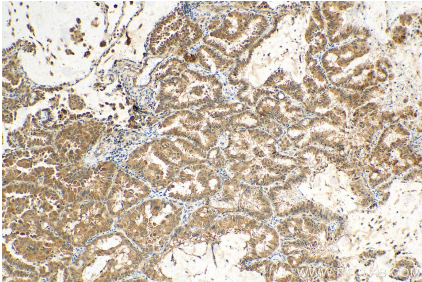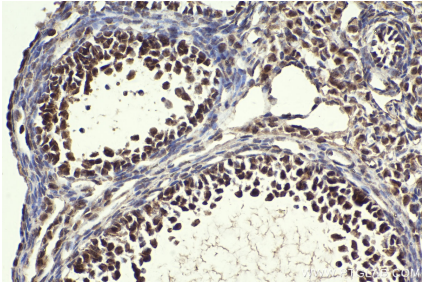

Immunohistochemical analysis of paraffin-embedded human lung cancer tissue slide using 10478-2-AP (IRAK1 antibody) at dilution of 1:600 (under 10x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).
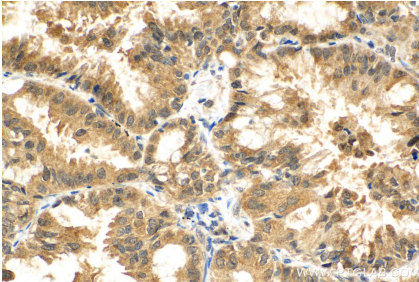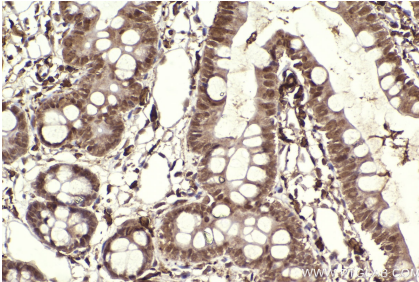

Immunohistochemical analysis of paraffin-embedded human lung cancer tissue slide using 10478-2-AP (IRAK1 antibody) at dilution of 1:600 (under 40x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).
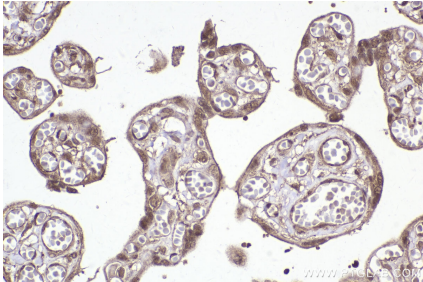

Immunohistochemical analysis of paraffin-embedded human placenta tissue slide using 10478-2-AP (IRAK1 antibody) at dilution of 1:1000 (under 40x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).


Immunohistochemical analysis of paraffin-embedded mouse ovary tissue slide using 10478-2-AP (IRAK1 antibody) at dilution of 1:500 (under 40x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).

Immunohistochemical analysis of paraffin-embedded rat intestine tissue slide using 10478-2-AP (IRAK1 antibody) at dilution of 1:500 (under 40x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).
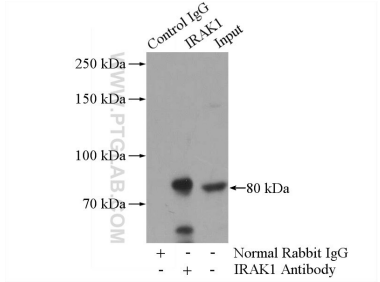
IP result of anti-IRAK1 (IP:10478-2-AP, 4ug; Detection:10478-2-AP 1:600) with HeLa cells lysate 2800ug.
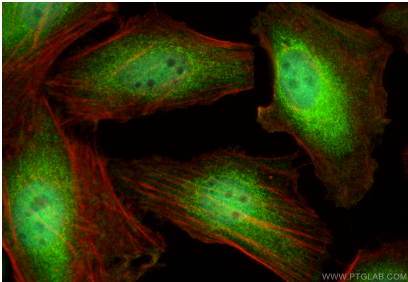
Immunofluorescent analysis of (4% PFA) fixed
HeLa cells using IRAK1 antibody (10478-2-AP) at
dilution of 1:400 and CoraLite®488-Conjugated
Goat Anti-Rabbit IgG(H+L) (SA00013-2), CL594-
Phalloidin (red).