For Research Use Only

IRAK1 Monoclonal antibody

Catalog Number:66653-1-Ig Featured Product 4 Publications

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Basic Information

Catalog Number:
66653-1-Ig

Size:
150ul , Concentration: 1440 ug/ml by Nanodrop and 1000 ug/ml by Bradford method using BSA as the standard;

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:
WB, IHC, ELISA

Cited Applications:
IHC, IF

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-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
Gang Xu	33664485	Cell Mol Immunol	IF
Wei-Wei Li	38078859	J Cell Biol	IF
Xiaoli Zhang	37676254	Biol Reprod	IHC

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
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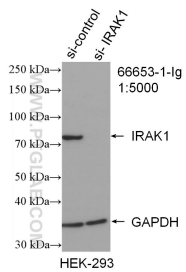
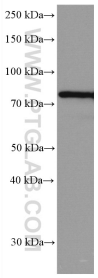
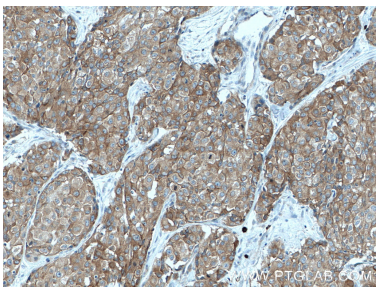
Selected Validation Data



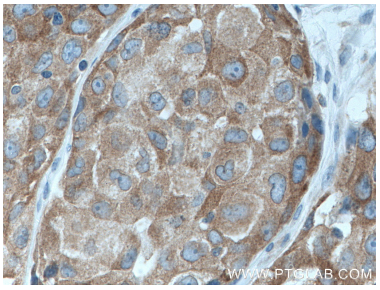
WB result of IRAK1 antibody (66653-1-Ig; 1:5000; incubated at room temperature for 1.5 hours) with sh-Control and sh-IRAK1 transfected HEK-293 cells.



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).