

For Research Use Only

# IRAK1 Monoclonal antibody, PBS Only



Catalog Number: 66653-1-PBS

Featured Product

## Basic Information

<b>Catalog Number:</b> 66653-1-PBS	<b>GenBank Accession Number:</b> BC014963	<b>Purification Method:</b> Protein A purification
<b>Size:</b> 100ug , Concentration: 1 mg/ml by Nanodrop;	<b>GeneID (NCBI):</b> 3654	<b>CloneNo.:</b> 1H10A7
<b>Source:</b> Mouse	<b>UNIPROT ID:</b> P51617	
<b>Isotype:</b> IgG2a	<b>Full Name:</b> interleukin-1 receptor-associated kinase 1	
<b>Immunogen Catalog Number:</b> AG0728	<b>Calculated MW:</b> 77 kDa	
	<b>Observed MW:</b> 80 kDa	

## Applications

**Tested Applications:**  
WB, IHC, Indirect ELISA

**Species Specificity:**  
Human

## 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)

## Storage

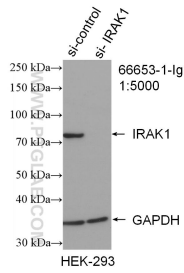
**Storage:**  
Store at -80°C.

**Storage Buffer:**  
PBS Only

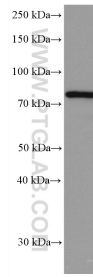
For technical support and original validation data for this product please contact:  
T: 1 (888) 4PTGLAB (1-888-478-4522) (toll free in USA), or 1(312) 455-8498 (outside USA)  
E: [proteintech@ptglab.com](mailto:proteintech@ptglab.com)  
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This product is exclusively available under Proteintech Group brand and is not available to purchase from any other manufacturer.

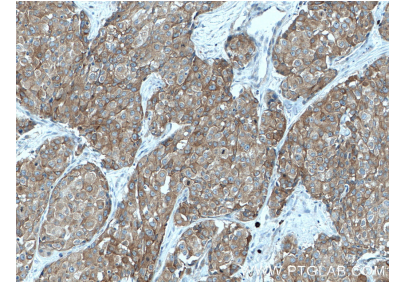
## Selected Validation Data



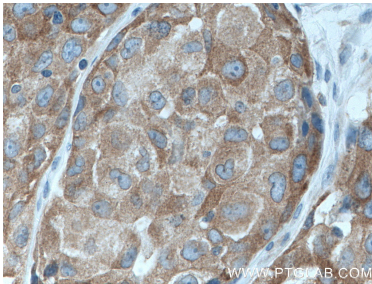
WB result of IRAK1 antibody (66653-1-Ig; 1:5000; incubated at room temperature for 1.5 hours) with sh-Control and sh-IRAK1 transfected HEK-293 cells. This data was developed using the same antibody clone with 66653-1-PBS in a different storage buffer formulation.



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. This data was developed using the same antibody clone with 66653-1-PBS in a different storage buffer formulation.



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). This data was developed using the same antibody clone with 66653-1-PBS in a different storage buffer formulation.



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). This data was developed using the same antibody clone with 66653-1-PBS in a different storage buffer formulation.