

### Order Information

Description: Ms anti Phospho-IRAK4(pT345)  
 Catalogue#: 600-560  
 Lot#: See the label  
 Size: 100 µg/200 ul  
 Host: Mouse  
 Clone: A8A8  
 Isotyping: IgG1.k  
 Application: ELISA, WB, IHC  
 Reactivity: Hu, Ms, Bv, Dg

## Mouse anti-Phospho-IRAK-4(pThr<sup>345</sup>)

Synonym: Interleukin-1 receptor-associated kinase 4; IRAK-4, IPD1; REN64; NY-REN-64

### ANTIGEN PREPARATION

A synthetic peptide surrounding to the epitope -VMTSR- with a phosphorylation site at Thr345 of human IRAK-4 protein. This sequence is identical among human, mouse, bovine and dog.

### BACKGROUND

IRAK (IL-1 associated serine/threonine kinase) is a critical regulator of Interleukin-1 (IL-1) induced activation of the NFκB pathway. IL-1 stimulation leads to the recruitment of interleukin-1 receptor-associated kinase (IRAK) to the IL-1 receptor, where IRAK is phosphorylated, ubiquitinated, and eventually degraded. There are four members (IRAK1, IRAK2, IRAK3/IRAK-M and IRAK4). IRAK-4, recently found another IRAK family member necessary for the IL-1 pathway, is able to phosphorylate IRAK *in vitro* suggests that IRAK-4 might be the IRAK kinase. IRAK4 is required for the efficient recruitment of IRAK to the IL-1 receptor complex.

### PURIFICATION

The Mouse IgG is purified by Isotyping-specific Affinity Purification.

### SPECIFICITY

This antibody recognizes IRAK-4(pT345) with a phosphorylated site at Threonine 345. It does not cross-react with non-phosphospecific peptide.

### FORMULATION

This affinity purified antibody is supplied in sterile Phosphate-buffered saline (pH7.2) containing antibody stabilizer

### STORAGE

The antibodies are stable for 12 months from date of receipt when stored at -20°C to -70°C. The antibodies can be stored at 2°C-8°C for three month without detectable loss of activity. Avoid repeated freezing-thawing cycles.

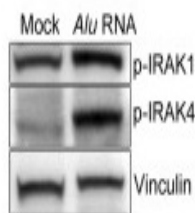
### APPLICATIONS/SUGGESTED WORKING DILUTIONS

Western Blot	0.1-1 µg/ml
ELISA	0.01-0.1 µg/ml
Immunoprecipitation	2-5 µg/ml
IHC	2-5 µg/ml
Flow cytometry	Not tested

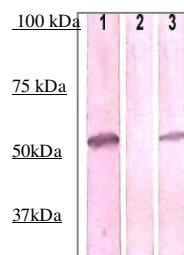
<b>MOLECULAR WEIGHT:</b>	~51 kDa
<b>POSITIVE CONTROL:</b>	Jurkat Cell lysate
<b>CELLULAR LOCATION:</b>	Cytoplasmic

Optimal dilutions should be determined by researchers for the specific applications.

### DATA ATTACHMENTS

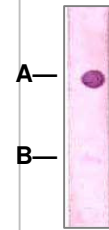


**Western Blot:** Western blot of Alu RNA-induced IRAK1 and IRAK4 phosphorylation (1:500) in human RPE cells. Courtesy from Dr. Hirano Cell 149 (4), p847-859, (2012)



#### Western Blot:

The 5 x 10<sup>7</sup> Jurkat cells were stimulated by 50 ng/ml IL-1 for 10 min, collected, lysed, resolved onto 10% SDS-PAGE, transferred onto NC membrane, and followed by an immunoblotting with Mouse anti IRAK4 (pT345) (Cat#600-560) antibody at 1:500 (lane 1). Lane 2 was pre-incubated with Phosphospecific peptide, Lane 3 was pre-incubated with non-phospho specific peptide. An immunoreactive band is observed around ~51 kDa.



#### Dot Blot:

1 µg peptide was blot onto NC membrane A: IRAK-4(pT345) B: IRAK-4(non phosphorylated) Followed by Mouse anti IRAK-4 (pT345) (Cat# 600-560) incubation at a 1:1000 dilution.

### REFERENCES

Li S et al (2002) IRAK-4, A novel member of the IRAK family with the properties of an IRAK-kinase. PNAS 99 (8): 5567-5572.  
 Valeria Tarallo, Yoshio Hirano, Bradley D. Gelfand, Sami Dridi et al DICER1 Loss and Alu RNA Induce Age-Related Macular Degeneration via the NLRP3 Inflammasome and MyD88. Cell (2012) 149 (4): p847-859.

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