SunLong Biotech Co.,LTD
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[Primary Antibody]

Rabbit Anti-IRAK4 antibody

Catalog Number: SL2440R

FOR RESEARCH USE ONLY

[DATASHEET]

Host:	Rabbit
Isotype:	IgG
Clonality:	Polyclonal
Target:	IRAK4
Immunogen:	KLH conjugated synthetic peptide derived from human IRAK4: 21-120/460
Purification:	affinity purified by Protein A
Concentration:	1mg/ml
Storage:	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol. Shipped at 4℃. Store at -20 °C for one year. Avoid repeated freeze/thaw cycles.
Applications:	WB=1:500-2000 IHC-P=1:100-500 IHC-F=1:100-500 IF=1:100-500 （Paraffin sections need antigen repair） not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Reactivity:	Human,Mouse,Rat(predicted:Dog,Pig,Cow,Horse,Sheep)
Predicted MW.:	51kDa
Subcellular Location:	cytoplasmic
Background:	This gene encodes a kinase that activates NF-kappaB in both the Toll-like receptor (TLR) and T-cell receptor (TCR) signaling pathways. The protein is essential for most innate immune responses. Mutations in this gene result in IRAK4 deficiency and recurrent invasive pneumococcal disease. Multiple transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Aug 2011] **Function:** Serine/threonine-protein kinase that plays a critical role in initiating innate immune response against foreign pathogens. Involved in Toll-like receptor (TLR) and IL-1R signaling pathways. Is rapidly recruited by MYD88 to the receptor-signaling complex upon TLR activation to form the Myddosome together with IRAK2. Phosphorylates initially IRAK1, thus stimulating the kinase activity and

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	intensive autophosphorylation of IRAK1. Phosphorylates E3 ubiquitin ligases Pellino proteins (PELI1, PELI2 and PELI3) to promote pellino-mediated polyubiquitination of IRAK1. Then, the ubiquitin-binding domain of IKBKG/NEMO binds to polyubiquitinated IRAK1 bringing together the IRAK1-MAP3K7/TAK1-TRAF6 complex and the NEMO-IKKA-IKKB complex. In turn, MAP3K7/TAK1 activates IKKs (CHUK/IKKA and IKBKB/IKKB) leading to NF-kappa-B nuclear translocation and activation. Alternatively, phosphorylates TIRAP to promote its ubiquitination and subsequent degradation. Phosphorylates NCF1 and regulates NADPH oxidase activation after LPS stimulation suggesting a similar mechanism during microbial infections. **Subunit:** Associates with MYD88 and IRAK2 to form a ternary complex called the Myddosome. Once phosphorylated, IRAK4 dissociates from the receptor complex and then associates with the TNF receptor-associated factor 6 (TRAF6), IRAK1, and PELI1; this intermediate complex is required for subsequent NF-kappa-B activation. Interacts with IL1RL1. **Subcellular Location:** Cytoplasm. **Post-translational modifications:** Phosphorylated. DISEASE: Defects in IRAK4 are the cause of recurrent isolated invasive pneumococcal disease type 1 (IPD1) [MIM:610799]. Recurrent invasive pneumococcal disease (IPD) is defined as two episodes of IPD occurring at least 1 month apart, whether caused by the same or different serotypes or strains. Recurrent IPD occurs in at least 2% of patients in most series, making IPD the most important known risk factor for subsequent IPD. Defects in IRAK4 are the cause of IRAK4 deficiency (IRAK4D) [MIM:607676]. IRAK4 deficiency causes extracellular pyogenic bacterial and fungal infections in otherwise healthy children. **Similarity:** Belongs to the protein kinase superfamily. TKL Ser/Thr protein kinase family. Pelle subfamily. Contains 1 death domain. Contains 1 protein kinase domain. **Database links:** **Entrez Gene:** 51135 Human **Entrez Gene:** 266632 Mouse Omim: 606883 Human **SwissProt:** Q9NWZ3 Human **SwissProt:** Q8R4K2 Mouse **Unigene:** 138499 Human **Unigene:** 422858 Mouse

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[VALIDATION IMAGES]

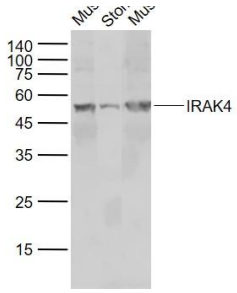


Figure 1. Sample: Lane 1: Muscle (Mouse) Lysate at 40 ug Lane 2: Stomach (Mouse) Lysate at 40 ug Lane 3: Muscle (Rat) Lysate at 40 ug Primary: Anti-IRAK4 (SL2440R) at 1/1000 dilution Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution Predicted band size: 51-55 kD Observed band size: 51 kD

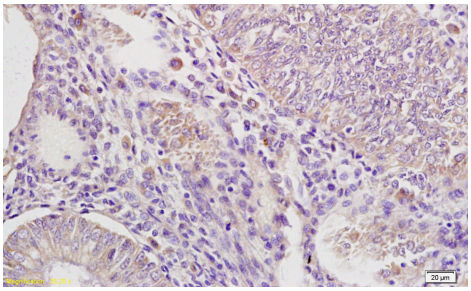


Figure 2. Tissue/cell: human endometrium carcinoma; 4% Paraformaldehyde-fixed and paraffin-embedded; Antigen retrieval: citrate buffer (0.01M, pH 6.0), Boiling bathing for 15min; Block endogenous peroxidase by 3% Hydrogen peroxide for 30min; Blocking buffer (normal goat serum,C-0005) at 37℃ for 20 min; Incubation: Anti-IRAK4 Polyclonal Antibody, Unconjugated(SL2440R) 1:200, overnight at 4°C, followed by conjugation to the secondary antibody(SP-0023) and DAB(C-0010) staining

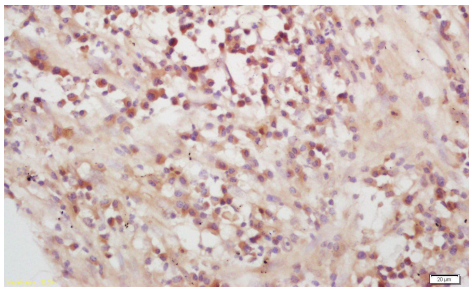


Figure 3. Tissue/cell: human lung carcinoma; 4% Paraformaldehyde-fixed and paraffin-embedded; Antigen retrieval: citrate buffer (0.01M, pH 6.0), Boiling bathing for 15min; Block endogenous peroxidase by 3% Hydrogen peroxide for 30min; Blocking buffer (normal goat serum,C-0005) at 37℃ for 20 min; Incubation: Anti-IRAK4 Polyclonal Antibody, Unconjugated(SL2440R) 1:200, overnight at 4°C, followed by conjugation to the secondary antibody(SP-0023) and DAB(C-0010) staining

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