

Rabbit IRAK4 Polyclonal Antibody | anti-IRAK4 antibody

Phospho-IRAK4 (Thr342) Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA329433	Rabbit	Human, Mouse Predicted Reactivity: Pig (100%), Bovine (100%), Horse (83%), Sheep (100%), Rabbit (100%), Dog (100%)	ELISA, Immunocytochemistry, Immunofluorescence, Western Blot

PRODUCT SYNONYMS

IRAK4; Polyclonal Antibody; Phospho-IRAK4 (Thr342) Antibody; IL-1 receptor-associated kinase 4; Interleukin 1 receptor associated kinase 4 mutant form 1; Interleukin-1 receptor-associated kinase 4; Interleukin1 receptor associated kinase 4; IPD1; IRAK 4; IRAK-4; IRAK4 mutated form 1; IRAK4_HUMAN; LOC 51135; NY REN 64; NY REN 64 antigen; NY-REN-64; REN64; Renal carcinoma antigen NY-REN-64; anti-IRAK4 antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse Predicted Reactivity: Pig (100%), Bovine (100%), Horse (83%), Sheep (100%), Rabbit (100%), Dog (100%)
Clonality	Polyclonal
Isotype	Rabbit IgG
Specificity	Phospho-IRAK4 (Thr342) Antibody detects endogenous levels of IRAK4 only when phosphorylated at Thr342.
Purity/Purification	The antibody is from purified rabbit serum by affinity purification via sequential chromatography on phospho-peptide and non-phospho-peptide affinity columns.
Form/Format	Liquid. Rabbit IgG in phosphate buffered saline, pH7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Applicable Applications for anti-IRAK4 antibody	ELISA (Peptide ELISA), ICC (Immunocytochemistry), IF (Immunofluorescence), WB (Western Blot)
Immunogen	A synthesized peptide derived from human IRAK4 around the phosphorylation site of Thr342.
Conjugation	Unconjugated
Fragment	Fab fragment
Post Translational Modifications	Phosphorylated.
Subunit Structure	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. Direct binding of SMAD6 to PELI1 prevents complex formation and hence negatively regulates IL1R-TLR signaling and eventually NF-kappa-B-mediated gene expression. Interacts with IL1RL1.
Similarity	Belongs to the protein kinase superfamily. TKL Ser/Thr protein kinase family. Pelle subfamily.
Subcellular Location	Cytoplasm.
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.

IMAGES



IF (Immunofluorescence)

Staining HepG2 cells(4h of LPS treatment) by IF/ICC. The samples were fixed with PFA and permeabilized in 0.1% Triton X-100,then blocked in 10% serum for 45 minutes at 25 degree C. Samples were then incubated with primary Ab(AF4378 1:200) and mouse anti-beta tubulin Ab(T0023 1:200) for 1 hour at 37 degree C. An AlexaFluor594 conjugated goat anti-rabbit IgG(H+L) Ab(Red) and an AlexaFluor488 conjugated goat anti-mouse IgG(H+L) Ab(Green) were used as the secondary antibody.The nuclear counter stain is DAPI(blue).



WB (Western Blot)

Western blot analysis of extracts from serum-starved KARPAS-299 IL-1, using Phospho-IRAK4(Thr342) Antibody. Lane1 was treated with phospho-blocking peptide, Lane2 was treated with non-phospho-blocking peptide.

ADDITIONAL INFORMATION

Related Product Information for anti-IRAK4 antibody	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 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 NADpHoxidase activation after LPS stimulation suggesting a similar mechanism during microbial infections.
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NCBI AND UNIPROT INFORMATION

NCBI GI #	20219010
NCBI GeneID	51135
UniProt Accession #	Q9NWX3; Q69FE1; Q8TDF7; Q9Y589
Molecular Weight	Predicted: 51 kDa Observed: 51 kDa
NCBI Official Full Name	interleukin-1 receptor associated kinase 4
NCBI Official Synonym Full Names	interleukin-1 receptor-associated kinase 4
NCBI Official Symbol	IRAK4
NCBI Official Synonym Symbols	IPD1; REN64; IRAK-4; NY-REN-64
NCBI Protein Information	interleukin-1 receptor-associated kinase 4; renal carcinoma antigen NY-REN-64
UniProt Protein Name	Interleukin-1 receptor-associated kinase 4
UniProt Gene Name	IRAK4
UniProt Synonym Gene Names	IRAK-4
UniProt Entry Name	IRAK4_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.