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IRAK4 Antibody (N-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP12875A

Product Information

Application	WB, E
Primary Accession	Q9NWZ3
Other Accession	Q8R4K2, Q1RMT8, NP_001107654.1, NP_057207.2
Reactivity	Human
Predicted	Bovine, Mouse, Rat, Canine, Rabbit
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB33094
Calculated MW	51530
Antigen Region	25-52

Additional Information

Gene ID	51135
Other Names	Interleukin-1 receptor-associated kinase 4, IRAK-4, Renal carcinoma antigen NY-REN-64, IRAK4
Target/Specificity	This IRAK4 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 25-52 amino acids from the N-terminal region of human IRAK4.
Dilution	WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	IRAK4 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	IRAK4
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 (PubMed:17878374). 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 NADPH oxidase activation after LPS stimulation suggesting a similar mechanism during microbial infections.

Cellular Location Cytoplasm.

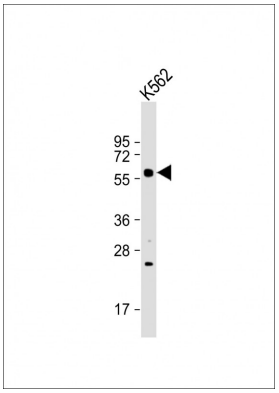
Background

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.

References

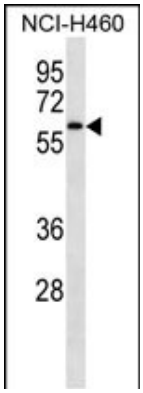
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Bailey, S.D., et al. Diabetes Care 33(10):2250-2253(2010)
McDonald, D.R., et al. J. Allergy Clin. Immunol. 126(2):332-337(2010)
Schuurhof, A., et al. Pediatr. Pulmonol. 45(6):608-613(2010)
Wang, Z., et al. Structure 14(12):1835-1844(2006)

Images



Anti-IRAK4 Antibody (N-term) at 1:1000 dilution + K562 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 52 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

IRAK4 Antibody (N-term) (Cat. #AP12875a) western blot analysis in NCI-H460 cell line lysates (35ug/lane).This demonstrates the IRAK4 antibody detected the IRAK4 protein (arrow).



Citations

- The anti-inflammatory effect and potential mechanism of cardamonin in DSS-induced colitis.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.