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IRAK2 Antibody

Catalog # ASC10350

Product Information

Application	WB, IF, ICC, E
Primary Accession	Q8CFA1
Other Accession	AAO24761, 37725373
Reactivity	Human, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	69047
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	IRAK2 antibody can be used for detection of IRAK2 by Western blot at 0.5 - 2 g/mL. Antibody can also be used for immunocytochemistry starting at 1 g/mL. For immunofluorescence start at 10 g/mL.

Additional Information

Gene ID	108960
Other Names	IRAK2 Antibody: IRAK-2, AI649099, 6330415L08Rik, Interleukin-1 receptor-associated kinase-like 2, IRAK-2, interleukin-1 receptor-associated kinase 2
Target/Specificity	Irak2; At least four isoforms of IRAK2 are known to exist; this antibody will detect all four isoforms. Anti-IRAK2 has no cross response to IRAK.
Reconstitution & Storage	IRAK2 antibody can be stored at 4℃ for three months and -20℃, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
Precautions	IRAK2 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	Irak2
Function	Binds to the IL-1 type I receptor following IL-1 engagement, triggering intracellular signaling cascades leading to transcriptional up-regulation and mRNA stabilization.
Tissue Location	Ubiquitously expressed, with a higher expression observed in brain, spleen and liver. Isoform 1 and isoform 2 are considered agonist and isoform 3 and isoform 4 are considered antagonist

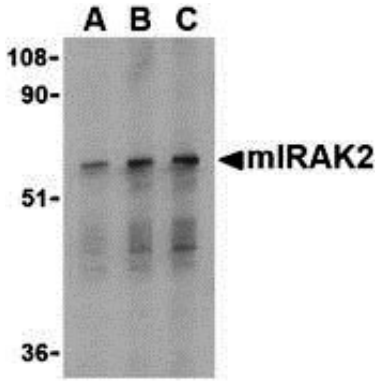
Background

IRAK2 Antibody: The pro-inflammatory cytokine IL-1 induces cellular response through two subunits of its receptor, IL-1 receptor I (IL-1RI) and IL-1 receptor accessory protein (IL-1RAcP). IL-1 receptor-associated kinase (IRAK) mediates activation of NF-κB, which is a pivotal transcription factor mediating inflammatory and immune response. A novel member in the IRAK/Pelle family has been identified and designated IRAK2. Both IRAK and IRAK2 recruit to the subunits of the IL-1R complex after IL-1 binding and lead to NF-κB activation. IRAKs also associate with Toll like receptor (TLR) and the dominant negative mutants of IRAKs inhibit LPS-induced NF-kB activation. Members in IRAK/Pelle family play a central role in IL-1R and TLR mediated inflammatory response. Unlike human IRAK2, murine IRAK2 exists as four alternately spliced isoforms (IRAK2a-d), with two isoforms (IRAK2c and d) acting in an inhibitory fashion. IRAK2 is expressed in a variety of tissues.

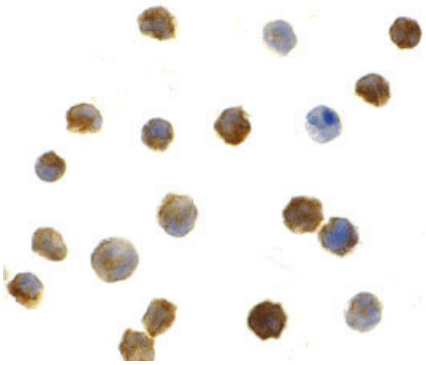
References

Muzio M, Ni J, Feng P, et al. IRAK (Pelle) family member IRAK-2 and MyD88 as proximal mediators of IL-1 signaling. Science 1997; 278:1612-5.
Zhang FX, Kirschning CJ, Mancinelli R, et al. Bacterial lipopolysaccharide activates nuclear factor-κB through interleukin-1 signaling mediators in cultured human dermal endothelial cells and mononuclear phagocytes. J. Biol. Chem. 1999; 274:7611-4.
Yang RB, Mark MR, Gurney AL, et al. Signaling events induced by lipopolysaccharide-activated toll-like receptor 2. J. Immunol. 1999; 163:639-43.
Hardy MP and O'Neill LAJ. The murine IRAK2 gene encodes four alternately spliced isoforms, two of which are inhibitory. J. Biol. Chem. 2004; 279:27699-708.

Images

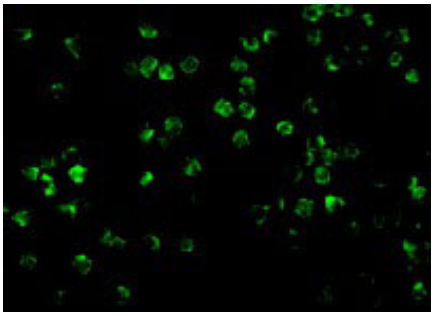


Western blot analysis of IRAK2 in RAW264.7 whole cell lysate with mIRAK2 antibody at (A) 0.5, (B) 1, and (C) 2 µg/mL.



Immunocytochemistry of IRAK2 in A-20 cells with IRAK2 antibody at 1 µg/mL.

Immunofluorescence of IRAK2 in A20 cells with IRAK2 antibody at 10 µg/mL.



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