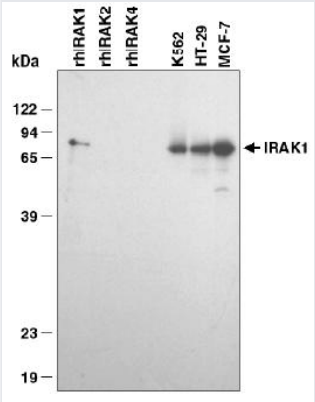
IRAK1 Antibody – Goat Polyclonal

PRODUCT OVERVIEW

Product Name	IRAK1, Polyclonal Antibody
Full Product Name	IRAK1 (IL-1 Receptor-associated Kinase)
Product Gene Name	anti-IRAK1 antibody
Product Synonym Names	Anti -IRAK1 (IL-1 Receptor-associated Kinase)
Clonality	Polyclonal
Isotype	IgG
Host	Goat
Species Reactivity	Human
Form/Format	Supplied as a lyophilized powder from PBS with 5% trehalose. Reconstitute with sterile 40-50% glycerol, PBS, 0.02% sodium azide.
Purity/Purification	Affinity Purified Purified by immunoaffinity chromatography.
Specificity	Recognizes endogenous human IRAK1 at 80kD. Does not detect recombinant human IRAK2 or IRAK4; crossreactivity with IRAK-M is not known.
Preparation and Storage	Lyophilized powder may be stored at -20 degree C. Stable for 12 months at -20 degree C. Reconstitute by adding sterile 40-50% glycerol, PBS, 0.02% sodium azide. Aliquot and store at -20 degree C. Reconstituted product is stable for 12 months at -20 degree C. For maximum recovery of product, centrifuge the original vial after thawing and prior to removing the cap. Further dilutions can be made in assay buffer.
Molecular Weight	67,988 Da
Chromosome Location	Chromosome: X; NC_000023.10 (153275957..153285342, complement). Location: Xq28
3D Structure	ModBase 3D Structure for Q96C06
Immunogen	E. coli-derived rhIRAK1 (aa1-693)
Product Categories/Family for anti-IRAK1 antibody	Antibodies; Abs to Protein Kinases
Applications Tested/Suitable for anti-IRAK1 antibody	Western Blot (WB)
Application Notes for anti-IRAK1 antibody	Suitable for use in Western Blot. Dilution: Western Blot: 1.0ug/ml Optimal dilution determined by the researcher.
Related Product Information for anti-IRAK1 antibody	MBS615736 is an antibody targeting IRAK1. Also known as IRAK1 (IL-1 Receptor-associated Kinase). Reactive in Human. Host: Goat.
Other Notes	Small volumes of anti-IRAK1 antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.



Western Blot (WB) of anti-IRAK1 antibody
Detection of IRAK1 with MBS615736. 10 ng of rhIRAK1, rhIRAK2, and rhIRAK4, and lysates from human K562, HT-29, and MCF-7 cells were resolved by SDS-PAGE. 1.0ug/mL of MBS615736 was used in Western Blot.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for IRAK1. It may not necessarily be applicable to this product.

NCBI GI #	68800350
NCBI GeneID	3654
NCBI Accession #	NP_001020414.1
UniProt Primary Accession #	Q96C06
UniProt Related Accession #	P51617; Q96C06
GenBank Nucleotide #	NM_001025243.1
NCBI Official Full Name	interleukin-1 receptor-associated kinase 1 isoform 3
NCBI Official Synonym Full Names	interleukin-1 receptor-associated kinase 1
NCBI Official Symbol	IRAK1
NCBI Official Synonym Symbols	IRAK; pelle
UniProt Protein Name	Interleukin-1 receptor associated-kinase 1 splice variant c
Protein Family	Interleukin-1 receptor-associated kinase
UniProt Gene Name	IRAK1
UniProt Entry Name	Q96C06_HUMAN
NCBI Protein Information	interleukin-1 receptor-associated kinase 1; IRAK-1; Pelle homolog; OTTHUMP00000026014; OTTHUMP00000026015; OTTHUMP00000026020; OTTHUMP00000180621
NCBI Summary for IRAK1	This gene encodes the interleukin-1 receptor-associated kinase 1, one of two putative serine/threonine kinases that become associated with the interleukin-1 receptor (IL1R) upon stimulation. This gene is partially responsible for IL1-induced upregulation of the transcription factor NF-kappa B. Alternatively spliced transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq]

UniProt Comments for IRAK1	IRAK1: a TKL kinase of the IRAK family. Involved in Toll/IL-1 signaling. One of two putative serine/threonine kinases that become associated with the interleukin-1 receptor following IL-1 engagement, triggering intracellular signaling cascades leading to transcriptional up-regulation and mRNA stabilization. Extensively phosphorylated after its association with IL1-R-1. Polyubiquitinated; after cell stimulation with IL-1-beta. Polyubiquitination occurs with polyubiquitin chains linked through 'Lys-63'. Partially responsible for IL1-induced upregulation of the transcription factor NF-kappa B. Three isoforms of the human protein and produced by alternative splicing. Isoform 1 binds rapidly but is then degraded allowing isoform 2 to mediate a slower, more sustained response to the cytokine. Isoform 2 is inactive suggesting that the kinase activity of this enzyme is not required for IL-1 signaling. Once phosphorylated, IRAK1 recruits the adapter protein PELI1. Isoform 1 and isoform 2 are ubiquitously expressed in all tissues examined, with isoform 1 being more strongly expressed than isoform 2. Protein type: Protein kinase, TKL; Kinase, protein; Protein kinase, Ser/Thr (non-receptor); EC 2.7.11.1; TKL group; IRAK family Chromosomal Location of Human Ortholog: Xq28 Cellular Component: interleukin-1 receptor complex; cytoplasm; plasma membrane; endosome membrane; lipid particle; cytosol; nucleus Molecular Function: NF-kappaB-inducing kinase activity; protein serine/threonine kinase activity; protein binding; protein homodimerization activity; interleukin-1 receptor binding; protein heterodimerization activity; heat shock protein binding; ubiquitin-protein ligase activity; kinase activity; ATP binding; protein kinase activity Biological Process: nerve growth factor receptor signaling pathway; activation of MAPK activity; protein amino acid autophosphorylation; positive regulation of transcription, DNA-dependent; positive regulation of smooth muscle cell proliferation; stress-activated MAPK cascade; protein ubiquitination; response to lipopolysaccharide; toll-like receptor 3 signaling pathway; signal transduction; protein amino acid phosphorylation; activation of NF-kappaB transcription factor; toll-like receptor 10 signaling pathway; toll-like receptor 5 signaling pathway; positive regulation of MAP kinase activity; response to peptidoglycan; transmembrane receptor protein serine/threonine kinase signaling pathway; lipopolysaccharide-mediated signaling pathway; JNK cascade; toll-like receptor 4 signaling pathway; aging; positive regulation of I-kappaB kinase/NF-kappaB cascade; MyD88-independent toll-like receptor signaling pathway; activation of NF-kappaB-inducing kinase; protein oligomerization; toll-like receptor 2 signaling pathway; MyD88-dependent toll-like receptor signaling pathway; inhibition of NF-kappaB transcription factor; toll-like receptor signaling pathway; innate immune response; regulation of cytokine and chemokine mediated signaling pathway; toll-like receptor 9 signaling pathway; negative regulation of apoptosis
Research Articles on IRAK1	**1.** LPS-induced activation of IRAK4 and TAK1, K63-linked polyubiquitination of IRAK1 and TRAF6, and disrupted IRAK1-TRAF6 and IRAK1-IKKgamma assembly associated with increased A20 expression
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