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hIRAK1-S376 Abtibody Blocking peptide
Synthetic peptide
Catalog # BP10960a

Specification

hIRAK1-S376 Abtibody Blocking peptide - Product Information

Primary Accession P51617

hIRAK1-S376 Abtibody Blocking peptide - Additional Information

Gene ID 3654

Other Names
Interleukin-1 receptor-associated kinase 1, IRAK-1, IRAK1, IRAK

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

hIRAK1-S376 Abtibody Blocking peptide - Protein Information

Name IRAK1 (HGNC:6112)

Synonyms IRAK

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. Association with MYD88 leads to IRAK1 phosphorylation by IRAK4 and subsequent autophosphorylation and kinase activation. 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 the interferon regulatory factor 7 (IRF7) to induce its activation and translocation to the nucleus, resulting in transcriptional activation of type I IFN genes, which drive the cell in an antiviral state. When sumoylated, translocates to the nucleus and phosphorylates STAT3.

Cellular Location
Cytoplasm. Nucleus. Lipid droplet Note=Translocates to the nucleus when sumoylated.

RSAD2/viperin recruits it to the lipid droplet (By similarity).

Tissue Location
Isoform 1 and isoform 2 are ubiquitously expressed in all tissues examined, with isoform 1 being more strongly expressed than isoform 2.

hIRAK1-S376 Abtibody Blocking peptide - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Blocking Peptides

hIRAK1-S376 Abtibody Blocking peptide - Images

hIRAK1-S376 Abtibody Blocking peptide - Background

This gene encodes the interleukin-1 receptor-associatedkinase 1, one of two putative serine/threonine kinases that becomeassociated with the interleukin-1 receptor (IL1R) upon stimulation.This gene is partially responsible for IL1-induced upregulation ofthe transcription factor NF-kappa B. Alternatively splicedtranscript variants encoding different isoforms have been found forthis gene.

hIRAK1-S376 Abtibody Blocking peptide - References

Bailey, S.D., et al. Diabetes Care 33(10):2250-2253(2010)Abu-Maziad, A., et al. Pediatr. Res. 68(4):323-329(2010)Vaughan, T., et al. Mol. Immunol. 47(15):2515-2518(2010)Potter, C., et al. Ann. Rheum. Dis. 69(7):1315-1320(2010)Chatzikyriakidou, A., et al. Scand. J. Immunol. 71(5):382-385(2010)