

IRAK-M (C-20): sc-23656

BACKGROUND

Interleukin-1 receptor (IL1R)-associated kinases (IRAKs) are important mediators in the signal transduction of Toll-like receptor (TLR) and IL1R family members, collectively referred to as TIRs. Binding of IL-1 to its cognate receptor results in the activation of the NFκB signaling pathway. An IL-1-dependent kinase termed IRAK-1 (for IL-1 receptor-associated kinase 1) coimmunoprecipitates with activated IL-1RI and is implicated as an upstream mediator of NFκB activation. A related *Drosophila* protein, Pelle, is a known upstream activator of Dorsal, the *Drosophila* homolog of NFκB. IRAK-2 is a proximal mediator of IL1, a component of the IL1R signaling complex, and is required for IL1R-induced NFκB activation. IRAK-4, like IRAK-1 and Pelle, has auto- and cross-phosphorylation kinase activity. IRAK-4 is strongly expressed in kidney and is also found in lung, testis, small intestine, breast, liver, and placenta. In contrast to the other IRAKs that are expressed in most cell types, IRAK-M is restricted to monocytic cells. IRAK-M mRNA transcripts are found predominantly in PBL and the monocytic cell lines U937 and THP-1.

REFERENCES

1. Croston, G.E., et al. 1995. NFκB activation by interleukin-1 (IL-1) requires an IL-1 receptor-associated protein kinase activity. *J. Biol. Chem.* 270: 16514-16517.
2. Cao, Z., et al. 1996. IRAK: a kinase associated with the interleukin-1 receptor. *Science* 271: 1128-1131.

CHROMOSOMAL LOCATION

Genetic locus: IRAK3 (human) mapping to 12q14.3.

SOURCE

IRAK-M (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of IRAK-M of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-23656 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

IRAK-M (C-20) is recommended for detection of IRAK-M of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for IRAK-M siRNA (h): sc-39098, IRAK-M shRNA Plasmid (h): sc-39098-SH and IRAK-M shRNA (h) Lentiviral Particles: sc-39098-V.

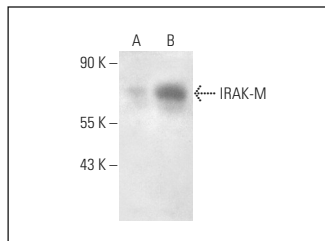
Molecular Weight of IRAK-M: 68 kDa.

Positive Controls: IRAK-M (h): 293T Lysate: sc-373656.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



IRAK-M (C-20): sc-23656. Western blot analysis of IRAK-M expression in non-transfected: sc-117752 (A) and human IRAK-M transfected: sc-373656 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Cui, J.G., et al. 2010. Differential regulation of interleukin-1 receptor-associated kinase-1 (IRAK-1) and IRAK-2 by microRNA-146a and NFκB in stressed human astroglial cells and in Alzheimer disease. *J. Biol. Chem.* 285: 38951-38960.
2. Kobayashi, H., et al. 2011. Neutrophils activate alveolar macrophages by producing caspase-6-mediated cleavage of IL-1 receptor-associated kinase-M. *J. Immunol.* 186: 403-410.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

MONOS
Satisfaction
Guaranteed

Try **IRAK-M (XX-6): sc-100389**, our highly recommended monoclonal alternative to IRAK-M (C-20).