

IRAK-M (N-20): sc-23654

BACKGROUND

Interleukin-1 receptor (IL-1R)-associated kinases (IRAKs) are important mediators in the signal transduction of toll-like receptor (TLR) and IL-1R family members, collectively referred to as TIRs. Binding of IL-1 to its cognate receptor results in the activation of the NF κ B signaling pathway. A 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 NF κ B activation. A related *Drosophila* protein, Pelle, is a known upstream activator of Dorsal, the *Drosophila* homolog of NF κ B. IRAK-2 is a proximal mediator of IL-1, a component of the IL-1R signaling complex, and is required for IL-1R-induced NF κ B 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 U-937 and THP-1.

REFERENCES

1. Croston, G.E., Cao, Z. and Goeddel, D.V. 1995. NF κ B activation by interleukin-1 (IL-1) requires an IL-1 receptor-associated protein kinase activity. *J. Biol. Chem.* 270: 16514-16517.
2. Cao, Z., Henzel, W.J. and Gao, X. 1996. IRAK: a kinase associated with the interleukin-1 receptor. *Science* 271: 1128-1131.
3. Muzio, M., Ni, J., Feng, P. and Dixit, V.M. 1997. IRAK (Pelle) family member IRAK-2 and MyD88 as proximal mediators of IL-1 signaling. *Science* 278: 1612-1615.
4. Li, S., Strelow, A., Fontana, E.J. and Wesche, H. 2002. IRAK-4: a novel member of the IRAK family with the properties of an IRAK-kinase. *Proc. Natl. Acad. Sci. USA* 99: 5567-5572.
5. Scanlan, M.J., Gordan, J.D., Williamson, B., Stockert, E., Bander, N.H., Jongeneel, V., Gure, A.O., Jager, D., Jager, E., Knuth, A., Chen, Y.T. and Old, L.J. 1999. Antigens recognized by autologous antibody in patients with renal-cell carcinoma. *Int. J. Cancer* 83: 456-464.
6. Wesche, H., Gao, X., Li, X., Kirschning, C.J., Stark, G.R. and Cao, Z. 1999. IRAK-M is a novel member of the Pelle/interleukin-1 receptor-associated kinase (IRAK) family. *J. Biol. Chem.* 274: 19403-19410.

SOURCE

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

PRODUCT

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

Blocking peptide available for competition studies, sc-23654 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

IRAK-M (N-20) is recommended for detection of IRAK-M of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

Molecular Weight of IRAK-M: 68 kDa.

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) 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.

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.


 MONOS
Satisfaction
Guaranteed

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