

IRAK-1 (h5): 293T Lysate: sc-177399

BACKGROUND

Three structurally related ligands for IL-1Rs have been described. These include two agonists, IL-1 α and IL-1 β , and a specific receptor antagonist, IL-1Ra. Two distinct receptors designated IL-1RI and IL-1RII have been identified, each of which belong to the Ig superfamily. The preponderance of evidence suggests IL-1RI to be the functional IL-1 receptor. Binding of IL-1 to its cognate receptor results in the activation of the NF κ B signaling pathway. The IL-1-dependent kinase termed IRAK (for IL-1 receptor-associated kinase) co-immunoprecipitates with activated IL-1RI and has been implicated as an upstream mediator of NF κ B activation. Additional support for this assertion comes from the fact that a related *Drosophila* protein, Pelle, is a known upstream activator of Dorsal, the *Drosophila* homolog of NF κ B.

REFERENCES

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2. McMahan, C.J., et al. 1991. A novel IL-1 receptor, cloned from B cells by mammalian expression, is expressed in many cell types. *EMBO J.* 10: 2821-2832.
3. Dower, S.K., et al. 1992. The interleukin-1 system: receptors, ligands and signals. *Chem. Immunol.* 51: 33-64.
4. Arend, W.P., et al. 1994. Binding of IL-1 α , IL-1 β and IL-1 receptor antagonist by soluble IL-1 receptors and levels of soluble IL-1 receptors in synovial fluids. *J. Immunol.* 153: 4766-4774.
5. Giri, J.G., et al. 1994. Elevated levels of shed type II IL-1 receptor in sepsis. Potential role for type II receptor in regulation of IL-1 responses. *J. Immunol.* 153: 5802-5809.
6. Croston, G.E., et al. 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.
7. Cao, Z., et al. 1996. IRAK: a kinase associated with the interleukin-1 receptor. *Science* 271: 1128-1131.
8. Hartupée, J., et al. 2008. Interleukin 1 α -induced NF κ B activation and chemokine mRNA stabilization diverge at IRAK-1. *J. Biol. Chem.* 283: 15689-15693.
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CHROMOSOMAL LOCATION

Genetic locus: IRAK1 (human) mapping to Xq28.

PRODUCT

IRAK-1 (h5): 293T Lysate represents a lysate of human IRAK-1 transfected 293T cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

RESEARCH USE

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

APPLICATIONS

IRAK-1 (h5): 293T Lysate is suitable as a Western Blotting positive control for human reactive IRAK-1 antibodies. Recommended use: 10-20 μ l per lane.

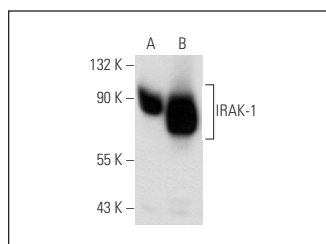
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

IRAK-1 (F-4): sc-5288 is recommended as a positive control antibody for Western Blot analysis of enhanced human IRAK-1 expression in IRAK-1 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

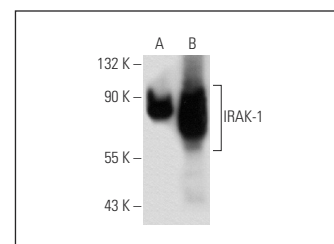
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker[™] Molecular Weight Standards: sc-2035, UltraCruz[®] Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA



IRAK-1 (F-4): sc-5288. Western blot analysis of IRAK-1 expression in non-transfected: sc-117752 (A) and human IRAK-1 transfected: sc-177399 (B) 293T whole cell lysates.



IRAK-1 (B-5): sc-55530. Western blot analysis of IRAK-1 expression in non-transfected: sc-117752 (A) and human IRAK-1 transfected: sc-177399 (B) 293T whole cell lysates.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

PROTOCOLS

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