

IRAK-2 (D-8): sc-515885

BACKGROUND

The interleukin-1 receptor-associated kinases (IRAKs) are important downstream signaling components of Toll-like receptors (TLRs). Four mammalian IRAKs have been found, namely IRAK-1, IRAK-2, IRAK-4, and IRAK-M, all of which share sequence homology to the *Drosophila melanogaster* protein kinase Pelle, and all contain a death domain (DD). The DD is used for protein-protein interactions with the DDs of other molecules, IRAK2 uses its DD to mediate its interaction with MyD88. The IRAKs have putative kinase domains, although IRAK1 has dispensable kinase activity because interleukin-1-induced NF- κ B activation could still be driven by a kinase-inactive mutant. Due to the absence of certain key residues within their putative kinase domains, both IRAK2 and IRAK-M are catalytically inactive.

REFERENCES

1. Sims, J.E., et al. 1989. Cloning of the interleukin-1 receptor from human T cells. *Proc. Natl. Acad. Sci. USA* 86: 8946-8950.
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-1a, IL-1b 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.

CHROMOSOMAL LOCATION

Genetic locus: IRAK2 (human) mapping to 3p25.3.

SOURCE

IRAK-2 (D-8) is a mouse monoclonal antibody raised against amino acids 1-112 mapping at the N-terminus of IRAK-2 of human origin.

PRODUCT

Each vial contains 200 μ g IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

IRAK-2 (D-8) is available conjugated to agarose (sc-515885 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-515885 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515885 PE), fluorescein (sc-515885 FITC), Alexa Fluor[®] 488 (sc-515885 AF488), Alexa Fluor[®] 546 (sc-515885 AF546), Alexa Fluor[®] 594 (sc-515885 AF594) or Alexa Fluor[®] 647 (sc-515885 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-515885 AF680) or Alexa Fluor[®] 790 (sc-515885 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

RESEARCH USE

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

APPLICATIONS

IRAK-2 (D-8) is recommended for detection of IRAK-2 of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (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-2 siRNA (h): sc-106916, IRAK-2 shRNA Plasmid (h): sc-106916-SH and IRAK-2 shRNA (h) Lentiviral Particles: sc-106916-V.

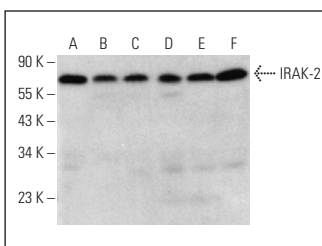
Molecular Weight of IRAK-2: 69 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227.

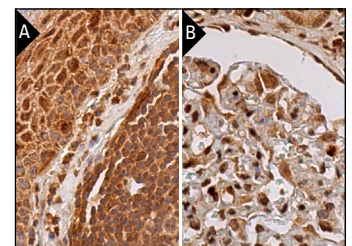
RECOMMENDED SECONDARY REAGENTS

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. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgG κ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



IRAK-2 (D-8): sc-515885. Western blot analysis of IRAK-2 expression in Hep G2 (A), RAW 264.7 (B), NIH/3T3 (C), Neuro-2A (D), c4 (E) and WR19L (F) whole cell lysates.



IRAK-2 (D-8): sc-515885. Immunoperoxidase staining of formalin fixed, paraffin-embedded human tonsil tissue showing cytoplasmic and nuclear staining of cells in germinal center, cells in non-germinal center and squamous epithelial cells (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing cytoplasmic and nuclear staining of cells in glomeruli and cells in tubules (B).

STORAGE

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

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