

IRAK-4 (H-100): sc-99154

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. IRAK family members include two active kinases, IRAK-1 and IRAK-4, and two inactive kinases, IRAK-2 and IRAK-M. Binding of IL-1 to its cognate receptor results in the activation of the NF κ B signaling pathway and MAP kinase pathways. IRAK-4 appears to act up-stream of other IRAKs and phosphorylates IRAK-1 on Threonine 387. It is highly expressed in liver and kidney tissues, but also displays a wide, low level of expression in other tissues. IRAK-4 is an essential component of innate immunity. Deficiency of IRAK-4 leads to recurrent bacterial infections and profound hyporesponsiveness to LPS and IL-1. Therefore, IRAK-4 may be a potential target for therapeutic drug design.

REFERENCES

1. Li, S., et al. 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.
2. Janssens, S., et al. 2003. Functional diversity and regulation of different interleukin-1 receptor-associated kinase (IRAK) family members. *Mol. Cell* 11: 293-302.

CHROMOSOMAL LOCATION

Genetic locus: IRAK4 (human) mapping to 12q12.

SOURCE

IRAK-4 (H-100) is a rabbit polyclonal antibody raised against amino acids 1-100 mapping at the N-terminus of IRAK-4 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.

APPLICATIONS

IRAK-4 (H-100) is recommended for detection of IRAK-4 of human origin by Western Blotting (starting dilution 1:200, 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

IRAK-4 (H-100) is also recommended for detection of IRAK-4 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for IRAK-4 siRNA (h): sc-45400, IRAK-4 shRNA Plasmid (h): sc-45400-SH and IRAK-4 shRNA (h) Lentiviral Particles: sc-45400-V.

Molecular Weight (predicted) of IRAK-4: 52 kDa.

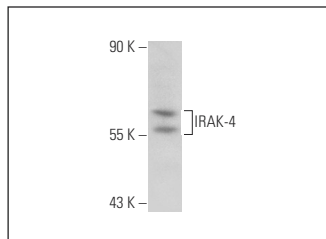
Molecular Weight (observed) of IRAK-4: 51-68 kDa.

Positive Controls: THP-1 cell lysate: sc-2238, MCF7 whole cell lysate: sc-2206 or Jurkat whole cell lysate: sc-2204.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



IRAK-4 (H-100): sc-99154. Western blot analysis of IRAK-4 expression in Jurkat whole cell lysate.

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 NF κ B in stressed human astroglial cells and in Alzheimer disease. *J. Biol. Chem.* 285: 38951-38960.

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.

PROTOCOLS

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


 MONOS
Satisfaction
Guaranteed

Try **IRAK-4 (G-2): sc-374349** or **IRAK-4 (5-RY38): sc-134368**, our highly recommended monoclonal alternatives to IRAK-4 (H-100).