

TIRAP (FL-235): sc-28822

BACKGROUND

Mammalian toll-like receptors (TLRs) recognize conserved products of microbial metabolism and activate NFκB and other signaling pathways through the adapter protein MyD88. MyD88 functions as an adapter protein in the association of IL-1 receptor associated kinase (IRAK) with the IL-1 receptor. MyD88 contains a characteristic N-terminal death domain, which is essential for NFκB activation, and an adjacent toll/IL-1R homology domain (TIR domain), which is responsible for signal transduction. TIR domain-containing adapter protein (TIRAP), also designated MAL (MyD88 adapter-like), MyD88 or TLR-4 adaptor protein, is a cytoplasmic TIR-domain-containing protein that activates NFκB, Jun N-terminal kinase and extracellular signal-regulated kinase-1 and -2. TIRAP forms homodimers and heterodimers with MyD88. IRAK-2, but not IRAK-1, is required for the activation of NFκB by TIRAP which associates with IRAK-2 through the TIR domain. In addition, TIRAP associates with TLR-4, suggesting that it plays a role in TLR-4 signal transduction.

CHROMOSOMAL LOCATION

Genetic locus: TIRAP (human) mapping to 11q24.2; Tirap (mouse) mapping to 9 A4.

SOURCE

TIRAP (FL-235) is a rabbit polyclonal antibody raised against amino acids 1-235 representing full length MAL 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.

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.

APPLICATIONS

TIRAP (FL-235) is recommended for detection of TIRAP of mouse, rat and 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 TIRAP siRNA (h): sc-42932, TIRAP siRNA (m): sc-44740, TIRAP shRNA Plasmid (h): sc-42932-SH, TIRAP shRNA Plasmid (m): sc-44740-SH, TIRAP shRNA (h) Lentiviral Particles: sc-42932-V and TIRAP shRNA (m) Lentiviral Particles: sc-44740-V.

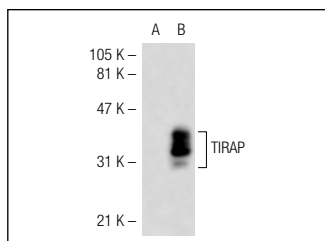
Molecular Weight of TIRAP: 36 kDa.

Positive Controls: ES-2 cell lysate: sc-24674, TIRAP (h): 293T Lysate: sc-114950 or Caki-1 cell lysate: sc-2224.

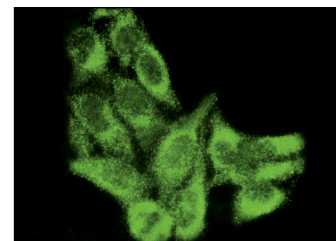
RECOMMENDED SECONDARY REAGENTS

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



TIRAP (FL-235): sc-28822. Western blot analysis of TIRAP expression in non-transfected: sc-117752 (A) and human TIRAP transfected: sc-114950 (B) 293T whole cell lysates.



TIRAP (FL-235): sc-28822. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

- Matsunaga, N., et al. 2011. TAK-242 (resatorvid), a small-molecule inhibitor of Toll-like receptor (TLR) 4 signaling, binds selectively to TLR4 and interferes with interactions between TLR4 and its adaptor molecules. *Mol. Pharmacol.* 79: 34-41.
- Ma, Y., et al. 2012. Toll-like receptor (TLR) 2 and TLR4 differentially regulate doxorubicin induced cardiomyopathy in mice. *PLoS One* 7: e40763.
- Aksoy, E., et al. 2012. The p110δ isoform of the kinase PI3K controls the subcellular compartmentalization of TLR4 signaling and protects from endotoxic shock. *Nat. Immunol.* 13: 1045-1054.
- Antosz, H., et al. 2013. Aberrant TIRAP and MyD88 expression in B-cell chronic lymphocytic leukemia. *Blood Cells Mol. Dis.* 51: 48-55.

RESEARCH USE

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



Try **TIRAP (A-11): sc-166149** or **TIRAP (C-7): sc-166150**, our highly recommended monoclonal alternatives to TIRAP (FL-235).