

# TICAM-2 (I-12): sc-34744



The Power to Question

## BACKGROUND

TICAM-1, also known as Toll-interleukin-1 receptor domain (TIR)-containing adaptor molecule, maps at chromosome 19p13.3. It can physically bind the TIR domain of Toll-like receptor 3 (TLR3) and activate the IFN- $\beta$  promoter. TLR proteins are signaling molecules that can recognize pathogen associated molecular patterns and may function as a link between the innate and adaptive immune responses. TICAM-1 mediates dsRNA-TLR3-dependent production of IFN- $\beta$ . This TICAM-1-dependent pathway is important for other TLR-IFN- $\beta$  pathways, which form part of the MyD88-independent cellular immune response. TICAM-2, a cytoplasmic protein, physically bridges TLR4 and TICAM-1 and functionally transmits LPS-TLR4 signaling to TICAM-1, which in turn activates IRF-3. In its structural features, TICAM-2 resembles MAL/TIRAP, an adapter that links TLR2/4 and MyD88.

## REFERENCES

1. Yamamoto, M., et al. 2002. Cutting edge: a novel Toll/IL-1 receptor domain-containing adapter that preferentially activates the IFN- $\beta$  promoter in the Toll-like receptor signaling. *J. Immunol.* 169: 6668-6672.
2. Bin, L.H., et al. 2003. TIRP, a novel Toll/interleukin-1 receptor (TIR) domain-containing adapter protein involved in TIR signaling. *J. Biol. Chem.* 278: 24526-24532.
3. Oshiumi, H., et al. 2003. TIR-containing adapter molecule (TICAM)-2, a bridging adapter recruiting to Toll-like receptor 4 TICAM-1 that induces interferon- $\beta$ . *J. Biol. Chem.* 278: 49751-49762.
4. Fitzgerald, K.A., et al. 2003. LPS-TLR4 signaling to IRF-3/7 and NF $\kappa$ B involves the Toll adapters TRAM and TRIF. *J. Exp. Med.* 198: 1043-1055.
5. Oshiumi, H., et al. 2003. TICAM-1, an adaptor molecule that participates in Toll-like receptor 3-mediated interferon- $\beta$  induction. *Nat. Immunol.* 4: 161-167.
6. Seya, T., et al. 2005. TICAM-1 and TICAM-2: Toll-like receptor adapters that participate in induction of type 1 interferons. *Int. J. Biochem. Cell Biol.* 37: 524-529.

## CHROMOSOMAL LOCATION

Genetic locus: TICAM2 (human) mapping to 5q23.1; Ticam2 (mouse) mapping to 18 C.

## SOURCE

TICAM-2 (I-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of TICAM-2 of mouse origin.

## PRODUCT

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

Blocking peptide available for competition studies, sc-34744 P, (100  $\mu$ 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

TICAM-2 (I-12) is recommended for detection of TICAM-2 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), 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 TICAM-2 siRNA (h): sc-44747, TICAM-2 siRNA (m): sc-44748, TICAM-2 shRNA Plasmid (h): sc-44747-SH, TICAM-2 shRNA Plasmid (m): sc-44748-SH, TICAM-2 shRNA (h) Lentiviral Particles: sc-44747-V and TICAM-2 shRNA (m) Lentiviral Particles: sc-44748-V.

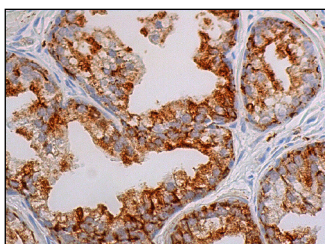
Molecular Weight of TICAM-2: 22 kDa.

Positive Controls: U-937 cell lysate: sc-2239, LPS treated U-937 whole cell lysate or PC-3 cell lysate: sc-2220.

## 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. 3) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

## DATA



TICAM-2 (I-12): sc-34744. Immunoperoxidase staining of formalin fixed, paraffin-embedded human prostate tissue showing cytoplasmic staining of glandular cells.

## 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](http://www.scbt.com) or our catalog for detailed protocols and support products.