

TRIM (E-12): sc-393175

BACKGROUND

TRIM (T-cell receptor interacting molecule) is a novel transmembrane adaptor protein which associates and comodulates with the TCR-CD3 ζ complex in human T lymphocytes and T cell lines. TRIM is a type III transmembrane protein that contains an 8-amino acid extracellular domain and an intracellular domain that contains four potential phosphorylation sites and eight tyrosine residues, at least three of which may be involved in SH2-mediated interactions with other signaling proteins. The human TRIM gene maps to chromosome 3q13 which is a susceptibility locus for rheumatoid arthritis and is in proximity to the CD28, CD86, and CD80 genes, all of which encode T-cell costimulatory molecules. TRIM is expressed in T-cells and natural killer cells, but not in B cells or monocytic cells. In T-cells, TRIM localizes to the cell membrane and associates with CD3 ζ and CD3 ϵ .

REFERENCES

1. Bruyns, E., et al. 1998. T cell receptor (TCR) interacting molecule (TRIM), a novel disulfide-linked dimer associated with the TCR-CD3- ζ complex, recruits intracellular signaling proteins to the plasma membrane. *J. Exp. Med.* 188: 561-575.
2. Kersh, G.J., et al. 1998. High- and low-potency ligands with similar affinities for the TCR: the importance of kinetics in TCR signaling. *Immunity* 9: 817-826.
3. Hubener, C., et al. 2000. Genomic organization and chromosomal localization of the human gene encoding the T-cell receptor-interacting molecule (TRIM). *Immunogenetics* 51: 154-158.
4. Huynh, T., et al. 2001. Developmentally regulated expression of the transmembrane adaptor protein TRIM in fetal and adult T cells. *Scand. J. Immunol.* 54: 146-154.
5. Kirchgessner, H., et al. 2001. The transmembrane adaptor protein TRIM regulates T cell receptor (TCR) expression and TCR-mediated signaling via an association with the TCR ζ chain. *J. Exp. Med.* 193: 1269-1284.

CHROMOSOMAL LOCATION

Genetic locus: TRAT1 (human) mapping to 3q13.13; Trat1 (mouse) mapping to 16 B5.

SOURCE

TRIM (E-12) is a mouse monoclonal antibody raised against amino acids 11-197 mapping within an internal region of TRIM of mouse origin.

PRODUCT

Each vial contains 200 μ g IgG $_1$ lambda light chain 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.

APPLICATIONS

TRIM (E-12) is recommended for detection of TRIM of mouse, rat and 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 TRIM siRNA (h): sc-106637, TRIM siRNA (m): sc-154641, TRIM shRNA Plasmid (h): sc-106637-SH, TRIM shRNA Plasmid (m): sc-154641-SH, TRIM shRNA (h) Lentiviral Particles: sc-106637-V and TRIM shRNA (m) Lentiviral Particles: sc-154641-V.

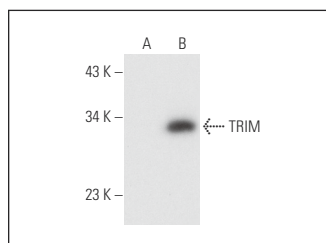
Molecular Weight of TRIM: 29 kDa.

Positive Controls: TRIM (h): 293T Lysate: sc-114237.

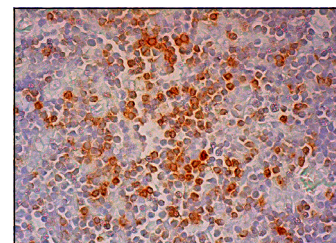
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG λ BP-HRP: sc-516132 or m-IgG λ BP-HRP (Cruz Marker): sc-516132-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 λ BP-FITC: sc-516185 or m-IgG λ BP-PE: sc-516186 (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 λ BP-HRP: sc-516132 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



TRIM (E-12): sc-393175. Western blot analysis of TRIM expression in non-transfected: sc-117752 (A) and human TRIM transfected: sc-114237 (B) 293T whole cell lysates.



TRIM (E-12): sc-393175. Immunoperoxidase staining of formalin fixed, paraffin-embedded human fetal thymus tissue showing membrane and cytoplasmic staining of thymic medullary epithelial cells.

RESEARCH USE

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

PROTOCOLS

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