SANTA CRUZ BIOTECHNOLOGY, INC.

# TRAC-1 (C-17): sc-85188

SANTA CRUZ BIOTECHNOLOGY

*The Power to Question*

## BACKGROUND

The RING-type zinc finger motif is present in a number of viral and eukaryotic proteins and is made of a conserved cysteine-rich domain that is able to bind two zinc atoms. Proteins that contain this conserved domain are generally involved in the ubiquitination pathway of protein degradation. TRAC-1 (T cell RING activation protein 1), also known as RNF125 (RING finger protein 125) or E3 ubiquitin-protein ligase RNF125, is a 232 amino acid novel E3 ubiquitin ligase that functions as a positive regulator in the T cell receptor signaling pathway. Expressed predominantly in lymphoid tissues such as spleen, thymus and bone marrow, TRAC-1 has been found to inhibit pathogen-induced cytokine production and downregulates HIV replication.

## REFERENCES


1. Saurin, A.J., et al. 1996. Does this have a familiar RING? Trends Biochem. Sci. 21: 208-214.
2. Zhao, H., et al. 2005. A novel E3 ubiquitin ligase TRAC-1 positively regulates T cell activation. J. Immunol. 174: 5288-5297.
3. Arimoto, K., et al. 2007. Negative regulation of the RIG-I signaling by the ubiquitin ligase RNF125. Proc. Natl. Acad. Sci. USA 104: 7500-7505.
4. Shoji-Kawata, S., et al. 2007. The RING finger ubiquitin ligase RNF125/TRAC-1 down-modulates HIV-1 replication in primary human peripheral blood mononuclear cells. Virology 368: 191-204.
5. Online Mendelian Inheritance in Man, OMIM™. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 610432. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
6. Giannini, A.L., et al. 2008. T cell regulator RNF125/TRAC-1 belongs to a novel family of ubiquitin ligases with zinc fingers and a ubiquitin-binding domain. Biochem. J. 410: 101-111.
7. Arimoto, K., et al. 2008. UbcH8 regulates ubiquitin and ISG15 conjugation to RIG-I. Mol. Immunol. 45: 1078-1084.


## CHROMOSOMAL LOCATION

Genetic locus: RNF125 (human) mapping to 18q12.1; Rnf125 (mouse) mapping to 18 A2.

## SOURCE

TRAC-1 (C-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of TRAC-1 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.

Blocking peptide available for competition studies, sc-85188 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-85188 X, 100 µg/0.1 ml.

## APPLICATIONS

TRAC-1 (C-17) is recommended for detection of TRAC-1 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

TRAC-1 (C-17) is also recommended for detection of TRAC-1 in additional species, including porcine.

Suitable for use as control antibody for TRAC-1 siRNA (h): sc-76723, TRAC-1 shRNA Plasmid (h): sc-76723-SH and TRAC-1 shRNA (h) Lentiviral Particles: sc-76723-V.

TRAC-1 (C-17) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

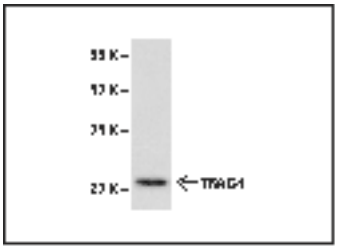
Molecular Weight of TRAC-1: 26 kDa.

Positive Controls: HT-29 whole cell lysate: sc-364232.

## 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.

## DATA




## 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.