

# TRIM10 (K-17): sc-79754

## BACKGROUND

The tripartite motif (TRIM) family of proteins are characterized by a conserved TRIM domain that includes a coiled-coil region, a B-box type zinc finger, one RING finger and three zinc-binding domains. TRIM10, also known as RING finger protein 9, RFB30 or HERF1, is a 481 amino acid protein that localizes to the cytoplasm. Expressed exclusively in hematopoietic tissues that contain developing myeloid, erythroid or megakaryocytic progenitors, TRIM10 has been shown to play a critical role in the terminal differentiation of erythroid cells. The functions of the various domains in TRIM10 suggest a role in the regulation of transcriptional signaling as well a mechanistic role in the morphological changes that occur during erythroid development. The expression of TRIM10 is dependent on upstream effectors such as PEBP2 $\beta$  and PU.1. Two named isoforms of TRIM10 exist as a result of alternative splicing events.

## REFERENCES

- Henry, J., et al. 1997. Cloning, structural analysis, and mapping of the B30 and B7 multigenic families to the major histocompatibility complex (MHC) and other chromosomal regions. *Immunogenetics* 46: 383-395.
- Jones, E.P., et al. 1999. MHC class I and non-class I gene organization in the proximal H2-M region of the mouse. *Immunogenetics* 49: 183-195.
- Harada, H., et al. 1999. HERF1, a novel hematopoiesis-specific RING finger protein, is required for terminal differentiation of erythroid cells. *Mol. Cell Biol.* 19: 3808-3815.
- Orimo, A., et al. 2000. Molecular cloning of testis-abundant finger Protein/Ring finger protein 23 (RNF23), a novel RING-B box-coiled coil-B30.2 protein on the class I region of the human MHC. *Biochem. Biophys. Res. Commun.* 276: 45-51.
- Nisole, S., et al. 2005. TRIM family proteins: retroviral restriction and antiviral defence. *Nat. Rev. Microbiol.* 3: 799-808.
- Online Mendelian Inheritance in Man, OMIM™. 2005. Johns Hopkins University, Baltimore, MD. MIM Number: 605701. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- Harada, H., et al. 2006. Implications of somatic mutations in the AML1/RUNX1 gene in myelodysplastic syndrome (MDS): future molecular therapeutic directions for MDS. *Curr. Cancer Drug Targets* 6: 553-565.
- Short, K.M. and Cox, T.C. 2006. Subclassification of the RBCC/TRIM superfamily reveals a novel motif necessary for microtubule binding. *J. Biol. Chem.* 281: 8970-8980.
- Blaybel, R., et al 2008. Downregulation of the Spi-1/PU.1 oncogene induces the expression of TRIM10/HERF1, a key factor required for terminal erythroid cell differentiation and survival. *Cell Res.* 18: 834-845.

## CHROMOSOMAL LOCATION

Genetic locus: TRIM10 (human) mapping to 6p22.1; Trim10 (mouse) mapping to 17 B1.

## SOURCE

TRIM10 (K-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of TRIM10 of human 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-79754 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

TRIM10 (K-17) is recommended for detection of TRIM10 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).

TRIM10 (K-17) is also recommended for detection of TRIM10 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for TRIM10 siRNA (h): sc-76732, TRIM10 siRNA (m): sc-76733, TRIM10 shRNA Plasmid (h): sc-76732-SH, TRIM10 shRNA Plasmid (m): sc-76733-SH, TRIM10 shRNA (h) Lentiviral Particles: sc-76732-V and TRIM10 shRNA (m) Lentiviral Particles: sc-76733-V.

Molecular Weight of TRIM10: 55 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227.

## 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.

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