SANTA CRUZ BIOTECHNOLOGY, INC.

Tom1 (H-72): sc-292313

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Tom1 (target of Myb 1) is a 492 amino acid cytoplasmic protein that belongs to the Tom1 family. Widely expressed with highest expression in heart, liver, placenta and skeletal muscle, Tom1 is thought to be involved in intracellular trafficking and may be associated with the translocation of ubiquitinated proteins to early endosomes for degradation. Tom1 contains one GAT domain and one VHS domain through which it interacts and complexes with proteins such as Tollip and endofin (also known as SARA). These interactions recruit Tom1 to the endosome, allowing it to participate in the endosomal trafficking of ubiquitin-tagged proteins. Human Tom1 shares 76% similarity with its chicken counterpart and 89% similarity with its mouse counterpart, suggesting a conserved function between species.

REFERENCES

1. Seroussi, E., et al. 1999. Tom1 genes map to human chromosome 22q13.1 and mouse chromosome 8C1 and encode proteins similar to the endosomal proteins HGS and STAM. Genomics 57: 380-388.
2. Misra, S., et al. 2000. Structure of the VHS domain of human Tom1 (target of Myb 1): insights into interactions with proteins and membranes. Biochemistry 39: 11282-11290.
3. Yamakami, M., et al. 2003. Tom1, a VHS domain-containing protein, interacts with Tollip, ubiquitin, and Clathrin. J. Biol. Chem. 278: 52865-52872.
4. Seet, L.F., et al. 2004. Endofin recruits Tom1 to endosomes. J. Biol. Chem. 279: 4670-4679.
5. Katoh, Y., et al. 2004. Tollip and Tom1 form a complex and recruit ubiquitin-conjugated proteins onto early endosomes. J. Biol. Chem. 279: 24435-24443.
6. Akutsu, M., et al. 2005. Structural basis for recognition of ubiquitinated cargo by Tom1-GAT domain. FEBS Lett. 579: 5385-5391.
7. Seet, L.F., et al. 2005. Endofin recruits Clathrin to early endosomes via Tom1. J. Cell Sci. 118: 575-587.
8. Katoh, Y., et al. 2006. Recruitment of Clathrin onto endosomes by the Tom1-Tollip complex. Biochem. Biophys. Res. Commun. 341: 143-149.

CHROMOSOMAL LOCATION

Genetic locus: TOM1 (human) mapping to 22q12.3; Tom1 (mouse) mapping to 8 C1.

SOURCE

Tom1 (H-72) is a rabbit polyclonal antibody raised against amino acids 368-439 mapping near the C-terminus of Tom1 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.

RESEARCH USE

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

APPLICATIONS

Tom1 (H-72) is recommended for detection of Tom1 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); non cross-reactive with other Tom family members.

Tom1 (H-72) is also recommended for detection of Tom1 in additional species, including equine, canine and bovine.

Suitable for use as control antibody for Tom1 siRNA (h): sc-76707, Tom1 siRNA (m): sc-154550, Tom1 shRNA Plasmid (h): sc-76707-SH, Tom1 shRNA Plasmid (m): sc-154550-SH, Tom1 shRNA (h) Lentiviral Particles: sc-76707-V and Tom1 shRNA (m) Lentiviral Particles: sc-154550-V.

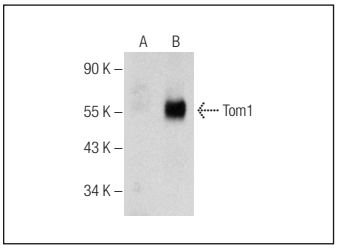
Molecular Weight of Tom1: 60 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203 or Tom1 (h): 293T Lysate: sc-116266.

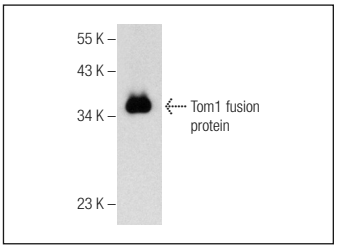
RECOMMENDED SECONDARY REAGENTS

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



Tom1 (H-72): sc-292313. Western blot analysis of Tom1 expression in non-transfected: sc-117752 (**A**) and human Tom1 transfected: sc-116266 (**B**) 293T whole cell lysates.



Tom1 (H-72): sc-292313. Western blot analysis of human recombinant Tom1 fusion protein.

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.