SANTA CRUZ BIOTECHNOLOGY, INC.

TULA (K-18): sc-83340



BACKGROUND

TULA (T cell ubiquitin ligand), also known as UBASH3A (ubiquitin associated and SH3 domain containing A), STS-2 or CLIP4, is a 661 amino acid protein that localizes to both the nucleus and the cytoplasm and contains one SH3 domain and one UBA domain. Expressed at high levels in thymus, bone marrow, spleen and peripheral blood leukocytes, TULA exists as either a homodimer or a homo-oligomer that interferes with the degradation of receptortype tyrosine kinases and promotes the accumulation of activated receptors on the cell surface. Additionally, TULA is part of an EGFR- and Cbl-containing complex that interacts with ubiquitinated proteins. The gene encoding TULA, which maps to human chromosome 21, may be involved in the pathogenesis of type I diabetes. Multiple isoforms of TULA are produced due to alternative splicing events.

REFERENCES

- 1. Wattenhofer, M., Shibuya, K., Kudoh, J., Lyle, R., Michaud, J., Rossier, C., Kawasaki, K., Asakawa, S., Minoshima, S., Berry, A., Bonne-Tamir, B., Shimizu, N., Antonarakis, S.E. and Scott, H.S. 2001. Isolation and characterization of the UBASH3A gene on 21q22.3 encoding a potential nuclear protein with a novel combination of domains. Hum. Genet. 108: 140-147.
- 2. Kowanetz, K., Crosetto, N., Haglund, K., Schmidt, M.H., Heldin, C.H. and Dikic, I. 2004. Suppressors of T-cell receptor signaling Sts-1 and Sts-2 bind to Cbl and inhibit endocytosis of receptor tyrosine kinases. J. Biol. Chem. 279: 32786-32795.
- 3. Feshchenko, E.A., Smirnova, E.V., Swaminathan, G., Teckchandani, A.M., Agrawal, R., Band, H., Zhang, X., Annan, R.S., Carr, S.A. and Tsygankov, A.Y. 2004. TULA: an SH3- and UBA-containing protein that binds to c-Cbl and ubiguitin. Oncogene 23: 4690-4706.
- 4. Bertelsen, V., Breen, K., Sandvig, K., Stang, E. and Madshus, I.H. 2007. The Cbl-interacting protein TULA inhibits dynamin-dependent endocytosis. Exp. Cell Res. 313: 1696-1709.
- 5. Collingwood, T.S., Smirnova, E.V., Bogush, M., Carpino, N., Annan, R.S. and Tsygankov, A.Y. 2007. T-cell ubiquitin ligand affects cell death through a functional interaction with apoptosis-inducing factor, a key factor of caspase-independent apoptosis. J. Biol. Chem. 282: 30920-30928.
- 6. Concannon, P., Onengut-Gumuscu, S., Todd, J.A., Smyth, D.J., Pociot, F., Bergholdt, R., Akolkar, B., Erlich, H.A., Hilner, J.E., Julier, C., Morahan, G., Nerup, J., Nierras, C.R., Chen, W.M. and Rich, S.S. 2008. A human type 1 diabetes susceptibility locus maps to chromosome 21g22.3. Diabetes 57: 2858-2861.
- 7. Agrawal, R., Carpino, N. and Tsygankov, A. 2008. TULA proteins regulate activity of the protein tyrosine kinase Syk. J. Cell. Biochem. 104: 953-964.

CHROMOSOMAL LOCATION

Genetic locus: UBASH3A (human) mapping to 21q22.3; Ubash3a (mouse) mapping to 17 A3.3.

RESEARCH USE

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

SOURCE

TULA (K-18) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of TULA of human origin.

PRODUCT

Each vial contains 100 µg lgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-83340 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

TULA (K-18) is recommended for detection of TULA 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).

TULA (K-18) is also recommended for detection of TULA in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for TULA siRNA (h): sc-91418, TULA siRNA (m): sc-154804, TULA shRNA Plasmid (h): sc-91418-SH, TULA shRNA Plasmid (m): sc-154804-SH, TULA shRNA (h) Lentiviral Particles: sc-91418-V and TULA shRNA (m) Lentiviral Particles: sc-154804-V.

Molecular Weight of TULA: 74 kDa.

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 antirabbit 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) 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.

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.