

TIN-Ag (T-15): sc-324419

BACKGROUND

TIN-Ag (tubulointerstitial nephritis antigen), also known as TIN1 or TIN2, is a 476 amino acid secreted protein that contains one SMB (somatomedin-B) domain and localizes to the extracellular matrix. Expressed during development in corneal tissue, kidney cortex and small intestine, TIN-Ag is a basement membrane glycoprotein that interacts with Integrin α 3 and Integrin α 5 and, via this interaction, mediates the adhesion of proximal tubule epithelial cells. Additionally, TIN-Ag is thought to play a role in the regulation of telomere length, possibly stabilizing the TRF2 (telomeric repeat binding factor 2) complex that is responsible for telomere elongation. Antibodies against TIN-Ag are present in the sera of tubulointerstitial nephritis-affected patients, suggesting a role for TIN-Ag in the pathogenesis of tubulointerstitial nephritis. Two isoforms of TIN-Ag are expressed due to alternative splicing events.

REFERENCES

1. Katz, A., Fish, A.J., Santamaria, P., Nevins, T.E., Kim, Y. and Butkowsky, R.J. 1992. Role of antibodies to tubulointerstitial nephritis antigen in human anti-tubular basement membrane nephritis associated with membranous nephropathy. *Am. J. Med.* 93: 691-698.
2. Chen, Y., Krishnamurti, U., Wayner, E.A., Michael, A.F. and Charonis, A.S. 1996. REceptors in proximal tubular epithelial cells for tubulointerstitial nephritis antigen. *Kidney Int.* 49: 153-157.
3. Nelson, T.R., Kim, Y., Michael, A.F., Butkowsky, R.J. and Charonis, A.S. 1998. Tubulointerstitial nephritis antigen (TIN-Ag) is expressed in distinct segments of the developing human nephron. *Connect. Tissue Res.* 37: 53-60.
4. Kim, S.H., Kaminker, P. and Campisi, J. 1999. TIN2, a new regulator of telomere length in human cells. *Nat. Genet.* 23: 405-412.
5. Kanwar, Y.S., Kumar, A., Yang, Q., Tian, Y., Wada, J., Kashihara, N. and Wallner, E.I. 1999. Tubulointerstitial nephritis antigen: an extracellular matrix protein that selectively regulates tubulogenesis vs. glomerulogenesis during mammalian renal development. *Proc. Natl. Acad. Sci. USA* 96: 11323-11328.
6. Ikeda, M., Takemura, T., Hino, S. and Yoshioka, K. 2000. Molecular cloning, expression, and chromosomal localization of a human tubulointerstitial nephritis antigen. *Biochem. Biophys. Res. Commun.* 268: 225-230.
7. Zhou, B., Nelson, T.R., Kashtan, C., Gleason, B., Michael, A.F., Vlassi, M. and Charonis, A.S. 2000. Identification of two alternatively spliced forms of human tubulointerstitial nephritis antigen (TIN-Ag). *J. Am. Soc. Nephrol.* 11: 658-668.
8. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 606749. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

CHROMOSOMAL LOCATION

Genetic locus: TINAG (human) mapping to 6p12.1; Tinag (mouse) mapping to 9 D.

RESEARCH USE

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

SOURCE

TIN-Ag (T-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of TIN-Ag of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-324419 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

TIN-Ag (T-15) is recommended for detection of TIN-Ag 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); non cross-reactive with TINAGL1.

TIN-Ag (T-15) is also recommended for detection of TIN-Ag in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for TIN-Ag siRNA (h): sc-95228, TIN-Ag siRNA (m): sc-154275, TIN-Ag shRNA Plasmid (h): sc-95228-SH, TIN-Ag shRNA Plasmid (m): sc-154275-SH, TIN-Ag shRNA (h) Lentiviral Particles: sc-95228-V and TIN-Ag shRNA (m) Lentiviral Particles: sc-154275-V.

Molecular Weight of TIN-Ag: 58 kDa.

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.

PROTOCOLS

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