

Tns4 (M-75): sc-98530

BACKGROUND

The Tensin (Tns) family of proteins is involved in the maintenance of cellular structure by anchoring actin filaments at the focal adhesion via F-actin binding and capping activities. Tns proteins contain a Src homology 2 (SH2) domain and have the ability to be phosphorylated, suggesting an additional role in signal transduction cascades. These diverse characteristics indicate that Tns proteins may be important links between the cytoskeleton and signal transduction pathways. Tns4 (tensin 4), also known as CTEN, is a 715 amino acid protein that localizes to focal adhesions and contains one SH2 domain and one phosphatase tensin-type domain. Expressed in placenta and prostate, Tns4 binds to actin filaments and is thought to be involved in cartilage development, cell migration and apoptosis, and may also play a role in linking signal transduction pathways to the cytoskeleton. Tns4 is subject to post-translational phosphorylation and is down-regulated in prostate cancer cells, suggesting a role in tumor suppression.

REFERENCES

1. Bockholt, S.M. and Burridge, K. 1993. Cell spreading on extracellular matrix proteins induces tyrosine phosphorylation of tensin. *J. Biol. Chem.* 268: 14565-14567.
2. Lo, S.H., Weisberg, E. and Chen, L.B. 1994. Tensin: a potential link between the cytoskeleton and signal transduction. *Bioessays* 16: 817-823.
3. Lo, S.H., Janmey, P.A., Hartwig, J.H. and Chen, L.B. 1994. Interactions of tensin with actin and identification of its three distinct actin-binding domains. *J. Cell Biol.* 125: 1067-1075.
4. Lo, S.H. and Lo, T.B. 2002. Cten, a COOH-terminal tensin-like protein with prostate restricted expression, is down-regulated in prostate cancer. *Cancer Res.* 62: 4217-4221.
5. Sasaki, H., Moriyama, S., Mizuno, K., Yukiue, H., Konishi, A., Yano, M., Kaji, M., Fukai, I., Kiriya, M., Yamakawa, Y. and Fujii, Y. 2003. Cten mRNA expression was correlated with tumor progression in lung cancers. *Lung Cancer* 40: 151-155.
6. Sasaki, H., Yukiue, H., Kobayashi, Y., Fukai, I. and Fujii, Y. 2003. Cten mRNA expression is correlated with tumor progression in thymoma. *Tumour Biol.* 24: 271-274.
7. Lo, S.S., Lo, S.H. and Lo, S.H. 2005. Cleavage of cten by caspase-3 during apoptosis. *Oncogene* 24: 4311-4314.

CHROMOSOMAL LOCATION

Genetic locus: Tns4 (mouse) mapping to 11 D.

SOURCE

Tns4 (M-75) is a rabbit polyclonal antibody raised against amino acids 530-604 mapping near the C-terminus of Tns4 of mouse origin.

PRODUCT

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

APPLICATIONS

Tns4 (M-75) is recommended for detection of Tns4 of mouse and rat 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Tns4 siRNA (m): sc-76706, Tns4 shRNA Plasmid (m): sc-76706-SH and Tns4 shRNA (m) Lentiviral Particles: sc-76706-V.

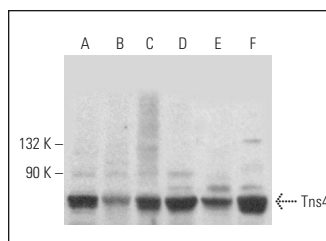
Molecular Weight of Tns4: 90 kDa.

Positive Controls: mouse colon extract: sc-364238, mouse placenta extract: sc-364247 or mouse prostate extract: sc-364249.

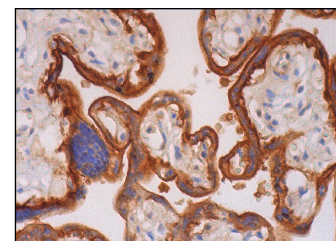
RECOMMENDED SECONDARY REAGENTS

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. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



Tns4 (M-75): sc-98530. Western blot analysis of Tns4 expression in mouse liver (A), mouse bladder (B), mouse prostate (C), mouse placenta (D), mouse colon (E) and mouse skin (F) tissue extracts.



Tns4 (M-75): sc-98530. Immunoperoxidase staining of formalin fixed, paraffin-embedded human placenta tissue showing membrane and cytoplasmic staining of trophoblastic cells.

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.