

Tescalcin (N-13): sc-109446

BACKGROUND

The EF-hand domain is a 12 amino acid loop motif that is commonly found in proteins that participate in calcium-binding events within the cell. EF-hand domains generally exist in a pair that, together, form a stable four-helix bundle that enables the binding of calcium ions. Tescalcin, also known as TESC, TSC or CHP3, is a 267 amino acid protein that contains one EF-hand domain and is expressed abundantly in adult heart tissue. Using calcium as a cofactor, Tescalcin interacts with NHE-1 and functions to couple the activation of the ERK cascade with the expression of Ets proteins during mega-karyocytic differentiation. Human Tescalcin shares 97% sequence identity with its mouse counterpart, suggesting a conserved role between species. Multiple isoforms of Tescalcin exist due to alternative splicing events.

REFERENCES

1. Perera, E.M., Martin, H., Seeherunvong, T., Kos, L., Hughes, I.A., Hawkins, J.R. and Berkovitz, G.D. 2001. Tescalcin, a novel gene encoding a putative EF-hand Ca^{2+} -binding protein, COL9A3, and Renin are expressed in the mouse testis during the early stages of gonadal differentiation. *Endocrinology* 142: 455-463.
2. Mailänder, J., Müller-Esterl, W. and Dedio, J. 2001. Human homolog of mouse Tescalcin associates with Na^+/H^+ exchanger type-1. *FEBS Lett.* 507: 331-335.
3. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 611585. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
4. Li, X., Liu, Y., Kay, C.M., Müller-Esterl, W. and Fliegel, L. 2003. The Na^+/H^+ exchanger cytoplasmic tail: structure, function, and interactions with Tescalcin. *Biochemistry* 42: 7448-7456.
5. Gutierrez-Ford, C., et al. 2003. Characterization of Tescalcin, a novel EF-hand protein with a single Ca^{2+} -binding site: metal-binding properties, localization in tissues and cells, and effect on calcineurin. *Biochemistry* 42: 14553-14565.
6. Malo, M.E. and Fliegel, L. 2006. Physiological role and regulation of the Na^+/H^+ exchanger. *Can. J. Physiol. Pharmacol.* 84: 1081-1095.
7. Levay, K. and Slepak, V.Z. 2007. Tescalcin is an essential factor in mega-karyocytic differentiation associated with Ets family gene expression. *J. Clin. Invest.* 117: 2672-2683.

CHROMOSOMAL LOCATION

Genetic locus: TESC (human) mapping to 12q24.22; Tesc (mouse) mapping to 5 F.

SOURCE

Tescalcin (N-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of Tescalcin of human origin.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PRODUCT

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

Blocking peptide available for competition studies, sc-109446 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Tescalcin (N-13) is recommended for detection of Tescalcin 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).

Tescalcin (N-13) is also recommended for detection of Tescalcin in additional species, including bovine.

Suitable for use as control antibody for Tescalcin siRNA (h): sc-96026, Tescalcin siRNA (m): sc-154194, Tescalcin shRNA Plasmid (h): sc-96026-SH, Tescalcin shRNA Plasmid (m): sc-154194-SH, Tescalcin shRNA (h) Lentiviral Particles: sc-96026-V and Tescalcin shRNA (m) Lentiviral Particles: sc-154194-V.

Molecular Weight of Tescalcin: 24 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.

RESEARCH USE

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

PROTOCOLS

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