

Tescalcin (E-17): sc-109444

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

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2. Mailänder, J., et al. 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., et al. 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 (E-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Tescalcin 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-109444 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Tescalcin (E-17) 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), immunoprecipitation [1-2 μ g per 100-500 μ g 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).

Tescalcin (E-17) is also recommended for detection of Tescalcin in additional species, including equine, canine and 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.

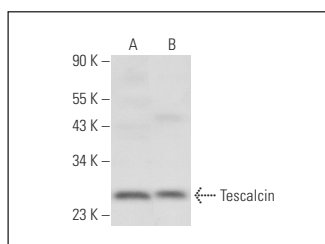
Molecular Weight of Tescalcin: 24 kDa.

Positive Controls: SH-SY5Y cell lysate: sc-3812 or KNRK whole cell lysate: sc-2214.

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



Tescalcin (E-17): sc-109444. Western blot analysis of Tescalcin expression in SH-SY5Y (A) and KNRK (B) whole cell lysates.

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.