

Telethonin (C-20): sc-8726

BACKGROUND

Titin, also known as connectin, is a large protein involved in the temporal and spatial control of the assembly of the highly ordered sarcomeres (contractile units) of striated muscle. In addition to sarcomere assembly Titin also functions to maintain the structural integrity of the contracting myofibrils within the muscle as well as organizing the machinery for condensation of chromosomes in dividing cells. Titin is a giant protein composed of 27,000 amino acids and contains an autoregulated serine kinase catalytic domain as well as a calcium/calmodulin binding region that are involved in its activation. Activated Titin phosphorylates the muscle protein Telethonin, a sarcomeric protein abundant in heart and skeletal muscle, implicating Titin activity in the reorganization of the cytoskeleton during myofibrillogenesis.

CHROMOSOMAL LOCATION

Genetic locus: TCAP (human) mapping to 17q12; Tcap (mouse) mapping to 11 D.

SOURCE

Telethonin (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of Telethonin of human origin.

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-8726 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

Telethonin (C-20) is recommended for detection of telethonin of mouse, rat and human 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).

Telethonin (C-20) is also recommended for detection of telethonin in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Telethonin siRNA (h): sc-36638, Telethonin siRNA (m): sc-36637, Telethonin shRNA Plasmid (h): sc-36638-SH, Telethonin shRNA Plasmid (m): sc-36637-SH, Telethonin shRNA (h) Lentiviral Particles: sc-36638-V and Telethonin shRNA (m) Lentiviral Particles: sc-36637-V.

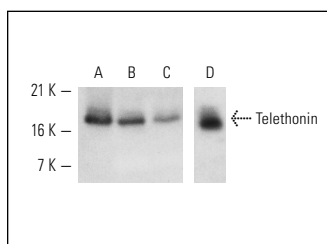
Molecular Weight of Telethonin: 19 kDa.

Positive Controls: mouse heart extract: sc-2254, rat skeletal muscle extract: sc-364810 or A-10 cell lysate: sc-3806.

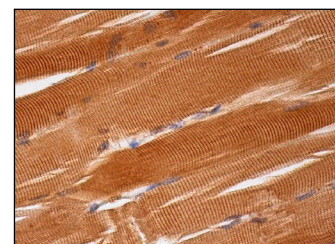
RECOMMENDED SECONDARY REAGENTS

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. 4) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



Western blot analysis of Telethonin expression in rat skeletal muscle (A), mouse heart (B), rat heart (C) tissue extracts and A-10 whole cell lysate (D). Antibodies tested include Telethonin (G-11): sc-25327 (A,B,C) and Telethonin (C-20): sc-8726 (D).



Telethonin (C-20): sc-8726. Immunoperoxidase staining of formalin fixed, paraffin-embedded human skeletal muscle tissue showing cytoplasmic staining of myocytes.

SELECT PRODUCT CITATIONS

- Kontrogiani-Konstantopoulos, A., et al. 2003. The hydrophilic domain of small ankyrin-1 interacts with the two N-terminal immunoglobulin domains of titin. *J. Biol. Chem.* 278: 3985-3991.
- Gómez-Díaz, B., et al. 2012. Immunodetection analysis of muscular dystrophies in Mexico. *Muscle Nerve* 45: 338-345.

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.



Try **Telethonin (G-11): sc-25327** or **Telethonin (53): sc-136097**, our highly recommended monoclonal alternatives to Telethonin (C-20). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **Telethonin (G-11): sc-25327**.