**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 (G-11) is a mouse monoclonal antibody raised against amino acids 58-167 of Telethonin of human origin.

**PRODUCT**

Each vial contains 200 μg IgG1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Telethonin (G-11) is available conjugated to agarose (sc-25327 AC), 500 μg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-25327 HRP), 200 μg/ml, for WB, IHC( P) and ELISA; to either phycoerythrin (sc-25327 PE), fluorescein (sc-25327 FITC), Alexa Fluor® 488 (sc-25327 AF488), Alexa Fluor® 546 (sc-25327 AF546), Alexa Fluor® 594 (sc-25327 AF594) or Alexa Fluor® 647 (sc-25327 AF647), 200 μg/ml, for WB (RGB), IF, IHC( P) and FCM; and to either Alexa Fluor® 680 (sc-25327 AF680) or Alexa Fluor® 790 (sc-25327 AF790), 200 μg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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**APPLICATIONS**

Telethonin (G-11) is recommended for detection of Telethonin of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1,000), 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).


Molecular Weight of Telethonin: 19 kDa.

Positive Controls: mouse heart extract: sc-2254, rat heart extract: sc-2393 or rat skeletal muscle extract: sc-364810.

**STORAGE**

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

**DATA**

![Telethonin (G-11): Western blot analysis of Telethonin expression in rat skeletal muscle (A), mouse heart (B) and rat heart (C) tissue extracts.](image1.png)

![Telethonin (G-11): Immunofluorescence staining of methanol-fixed Sol8 cells showing cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human heart muscle tissue showing cytoplasmic staining of myocytes (B).](image2.png)

**SELECT PRODUCT CITATIONS**


**RESEARCH USE**

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