

Troponin I (C-19): sc-8118

BACKGROUND

Actin is a highly conserved protein that is expressed in all eukaryotic cells. Actin filaments can form both stable and labile structures and are crucial components of microvilli and the contractile apparatus of muscle cells. Myosin is a hexamer of two heavy chains (MHC) and four light chains (MLC) that interacts with actin to generate the force for diverse cellular movements, including cytokinesis, phagocytosis and muscle contraction. Troponin facilitates the interaction between actin and myosin by binding to calcium. Troponin is made up of at least two subunits, which are divergent in cardiac muscle, fast skeletal muscle and slow skeletal muscle. Structures of skeletal muscle Troponin are composed of Troponin C (the sensor), Troponin I (the regulator) and Troponin T (the link to the muscle thin filament). Troponin C is dumbbell-shaped and has a hydrophobic pocket that increases the contractile force of muscle fibers. Troponin C has two isoforms: fast and slow. Fast Troponin C has two calcium binding sites while slow/cardiac Troponin C has a single calcium binding site.

CHROMOSOMAL LOCATION

Genetic locus: TNNI3 (human) mapping to 19q13.42; Tnni2 (mouse) mapping to 7 A1.

SOURCE

Troponin I (C-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of Troponin I-C 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-8118 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Troponin I (C-19) is recommended for detection of Troponin I, cardiac muscle 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); may cross-react with Troponin I, slow skeletal muscle and Troponin I, fast skeletal muscle.

Troponin I (C-19) is also recommended for detection of Troponin I, cardiac muscle in additional species, including equine, canine, bovine, porcine and avian.

Molecular Weight of Troponin I: 29 kDa.

Positive Controls: Sol8 cell lysate: sc-2249, rat heart extract: sc-2393 or mouse heart extract: sc-2254.

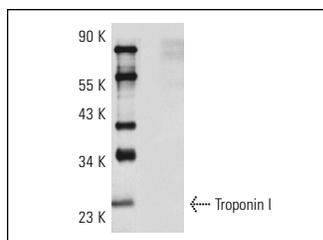
STORAGE

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.

DATA



Troponin I (C-19): sc-8118. Western blot analysis of Troponin I expression in Sol8 whole cell lysate.

SELECT PRODUCT CITATIONS

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- Lu, X., et al. 2006. Role of tumor necrosis factor- α in myocardial dysfunction and apoptosis during hindlimb ischemia and reperfusion. *Crit. Care Med.* 34: 484-491.
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- Gofflot, S., et al. 2008. Characterization of an antibody panel for immunohistochemical analysis of canine muscle cells. *Vet. Immunol. Immunopathol.* 125: 225-233.
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Try **Troponin I (E-9): sc-365446** or **Troponin I (C-4): sc-133117**, our highly recommended monoclonal alternatives to Troponin I (C-19). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **Troponin I (E-9): sc-365446**.