SANTA CRUZ BIOTECHNOLOGY, INC.

Tropomyosin α (V-21): sc-32516

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Tropomyosins are a group of structural proteins. Tropomyosins are present in virtually all eukaryotic cells, both muscle and non-muscle, where they bind actin filaments and function to modulate actin-Myosin interaction and stabilize actin filament structure. α-Tropomyosin is encoded by the TPM1 gene, which maps to human chromosome 15q22.2 and undergoes alternative splicing to generate at least four isoforms, including skeletal muscle (isoform 1), smooth muscle (isoform 2), fibroblast/TM3 (isoform 3) and isoform 4. β-Tropomyosin is encoded by the TPM2 gene, which maps to human chromosome 9p13.3 and undergoes alternative splicing to generate three isoforms, including skeletal muscle (isoform 1), non-muscle/fibroblast TM36/epithelial TMe1 (isoform 2) and non-muscle (isoform 3). Troponin I binds Tropomyosin at a specific region and the association of Tropomyosin-Troponin with actin filaments may increase the rigidity of actin filaments. Tropomyosin also interacts with Caldesmon to regulate smooth muscle contraction.

CHROMOSOMAL LOCATION

Genetic locus: TPM1 (human) mapping to 15q22.2; Tpm1 (mouse) mapping to 9 C.

SOURCE

Tropomyosin α (V-21) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Tropomyosin α of rat 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-32516 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Tropomyosin α (V-21) is recommended for detection of Tropomyosin α 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 Tropomyosin γ and Tropomyosin 4.

Tropomyosin α (V-21) is also recommended for detection of Tropomyosin α in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for Tropomyosin siRNA (h): sc-36734, Tropomyosin siRNA (m): sc-36735, Tropomyosin shRNA Plasmid (h): sc-36734-SH, Tropomyosin shRNA Plasmid (m): sc-36735-SH, Tropomyosin shRNA (h) Lentiviral Particles: sc-36734-V and Tropomyosin shRNA (m) Lentiviral Particles: sc-36735-V.

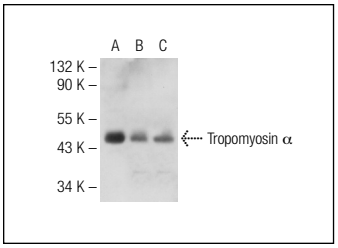
Molecular Weight of Tropomyosin α: 35-45 kDa.

Positive Controls: MIA PaCa-2 cell lysate: sc-2285, HeLa whole cell lysate: sc-2200 or L8 cell lysate: sc-3807.

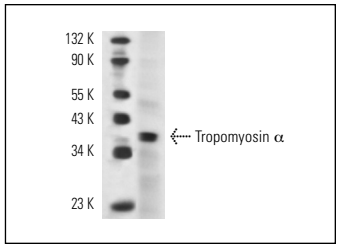
RECOMMENDED SECONDARY REAGENTS

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



Tropomyosin α (V-21): sc-32516. Western blot analysis of Tropomyosin α expression in 293T (**A**), HeLa (**B**) and MIA PaCa-2 (**C**) whole cell lysates.



Tropomyosin α (V-21): sc-32516. Western blot analysis of Tropomyosin α expression in Sol8 whole cell lysate.

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.

PROTOCOLS

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