SANTA CRUZ BIOTECHNOLOGY, INC.

Obscurin (H-300): sc-68849

BACKGROUND

Belonging to the protein kinase superfamily, Obscurin is a 7,968 amino acid protein that is specifically expressed in skeletal and cardiac muscle. Containing a GTPase nucleotide exchange factor (GEF) domain, Obscurin is localized in the sarcomere near the M-band and Z-disk where it participates in the G protein-regulated pathways that control the formation of new myofibrils. Obscurin contains 55 immunoglobulin (Ig)-like domains, through which it interacts with proteins such as Titin and calmodulin. During cardiac hypertrophy, the gene encoding Obscurin is upregulated to produce additional contractile units. Knockdown of Obscurin mRNA results in the disruption of M-bands and A-bands and reduction of Myosin and myomesin levels, suggesting that Obscurin is required for regular sarcomere structure. There are six isoforms of Obscurin that are produced as a result of alternative splicing events.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: OBSCN (human) mapping to 1q42.13; Obscn (mouse) mapping to 11 B1.3.

SOURCE

Obscurin (H-300) is a rabbit polyclonal antibody raised against amino acids 7700-7968 mapping at the C-terminus of Obscurin 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.

APPLICATIONS

Obscurin (H-300) is recommended for detection of Obscurin 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).

Obscurin (H-300) is also recommended for detection of Obscurin in additional species, including canine and porcine.

Suitable for use as control antibody for Obscurin siRNA (h): sc-75987, Obscurin siRNA (m): sc-75988, Obscurin shRNA Plasmid (h): sc-75987-SH, Obscurin shRNA Plasmid (m): sc-75988-SH, Obscurin shRNA (h) Lentiviral Particles: sc-75987-V and Obscurin shRNA (m) Lentiviral Particles: sc-75988-V.

Molecular Weight of Obscurin: 700-800 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

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.