

# CMYA5 (G-15): sc-167503

## BACKGROUND

CMYA5 (cardiomyopathy associated 5), also known as TRIM76 (tripartite motif-containing protein 76), myospryn, dystrobrevin-binding protein 2, SPRYD2 (SPRY domain-containing protein 2) or genethonin-3, is a 4,069 amino acid cytoplasmic protein that interacts with Dysbindin,  $\alpha$ -actinin-2 and PKA II $\alpha$  reg and belongs to the TRIM (tripartite motif) superfamily. Identified as a muscle-specific protein kinase A anchoring protein and involved in vesicular trafficking, CMYA5 is downregulated in muscle cell lines of patients with Duchenne muscular dystrophy (DMD) and is a late target in the PKA-CREB signal transduction pathway. CMYA5 is expressed in skin, heart and skeletal muscle, and contains one B30.2/SPRY domain and two Fibronectin type-III domains.

## REFERENCES

1. Benson, M.A., et al. 2004. Myospryn is a novel binding partner for Dysbindin in muscle. *J. Biol. Chem.* 279: 10450-10458.
2. Durham, J.T., et al. 2006. Myospryn is a direct transcriptional target for MEF-2A that encodes a striated muscle,  $\alpha$ -actinin-interacting, costamere-localized protein. *J. Biol. Chem.* 281: 6841-6849.
3. Nakagami, H., et al. 2007. Gene polymorphism of myospryn (cardiomyopathy-associated 5) is associated with left ventricular wall thickness in patients with hypertension. *Hypertens. Res.* 30: 1239-1246.
4. Kouloumenta, A., et al. 2007. Proper perinuclear localization of the TRIM-like protein myospryn requires its binding partner Desmin. *J. Biol. Chem.* 282: 35211-35221.
5. Reynolds, J.G., et al. 2008. Deregulated protein kinase A signaling and myospryn expression in muscular dystrophy. *J. Biol. Chem.* 283: 8070-8074.
6. Sarparanta, J. 2008. Biology of myospryn: what's known? *J. Muscle Res. Cell Motil.* 29: 177-180.

## CHROMOSOMAL LOCATION

Genetic locus: CMYA5 (human) mapping to 5q14.1; Cmya5 (mouse) mapping to 13 C3.

## SOURCE

CMYA5 (G-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of CMYA5 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-167503 P, (100  $\mu$ g 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

CMYA5 (G-15) is recommended for detection of CMYA5 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g 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); non cross-reactive with CMYA3.

CMYA5 (G-15) is also recommended for detection of CMYA5 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for CMYA5 siRNA (h): sc-91783, CMYA5 shRNA Plasmid (h): sc-91783-SH and CMYA5 shRNA (h) Lentiviral Particles: sc-91783-V.

Molecular Weight of CMYA5: 449 kDa.

## 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.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.