

# $\gamma$ -sarcoglycan (D-18): sc-14180

## BACKGROUND

The sarcoglycan transmembrane proteins are members of the dystrophin complex. Sarcoglycans cluster together to form a complex, which is localized in the cell membrane of skeletal, cardiac and smooth muscle fibers. Four sarcoglycan subunit proteins, designated  $\alpha$ -,  $\beta$ -,  $\gamma$ - and  $\delta$ -sarcoglycan, form a complex on the skeletal muscle cell surface membrane. A genetic defect in any one of these proteins causes the loss or marked decrease of the whole sarcoglycan complex, which is observed in the autosomal recessive muscular dystrophy, sarcoglycanopathy. In smooth muscle,  $\beta$ - and  $\delta$ -sarcoglycans are associated with  $\epsilon$ -sarcoglycan, a glycoprotein homologous to  $\alpha$ -sarcoglycan. Additionally, a complete deficiency in  $\delta$ -sarcoglycan is the cause of the Syrian hamster BIO.14 cardiomyopathy.

## CHROMOSOMAL LOCATION

Genetic locus: SGCG (human) mapping to 13q12.12; Sgcg (mouse) mapping to 14 D1.

## SOURCE

$\gamma$ -sarcoglycan (D-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of  $\gamma$ -sarcoglycan 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-14180 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

$\gamma$ -sarcoglycan (D-18) is recommended for detection of  $\gamma$ -sarcoglycan of human and, to a lesser extent, mouse and rat 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), 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).

$\gamma$ -sarcoglycan (D-18) is also recommended for detection of  $\gamma$ -sarcoglycan in additional species, including canine.

Suitable for use as control antibody for  $\gamma$ -sarcoglycan siRNA (h): sc-43424,  $\gamma$ -sarcoglycan siRNA (m): sc-43425,  $\gamma$ -sarcoglycan shRNA Plasmid (h): sc-43424-SH,  $\gamma$ -sarcoglycan shRNA Plasmid (m): sc-43425-SH,  $\gamma$ -sarcoglycan shRNA (h) Lentiviral Particles: sc-43424-V and  $\gamma$ -sarcoglycan shRNA (m) Lentiviral Particles: sc-43425-V.

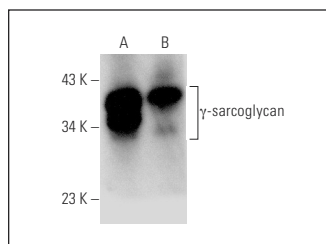
Molecular Weight of  $\gamma$ -sarcoglycan: 35 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, human heart extract: sc-363763 or human skeletal muscle extract: sc-363776.

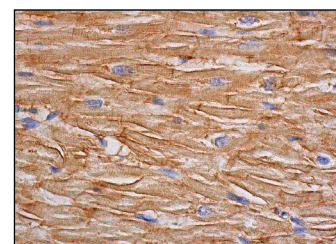
## RECOMMENDED SECONDARY REAGENTS

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. 4) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

## DATA



$\gamma$ -sarcoglycan (D-18): sc-14180. Western blot analysis of  $\gamma$ -sarcoglycan expression in human heart (A) and human skeletal muscle (B) tissue extracts.



$\gamma$ -sarcoglycan (D-18): sc-14180. Immunoperoxidase staining of formalin fixed, paraffin-embedded human heart muscle tissue showing membrane and cytoplasmic staining of myocytes.

## SELECT PRODUCT CITATIONS

- Zhang, Y., et al. 2006. Differential expression profiling between the relative normal and dystrophic muscle tissues from the same LGMD patient. *J. Transl. Med.* 4: 53.

## 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](http://www.scbt.com) or our catalog for detailed protocols and support products.

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Try  **$\gamma$ -sarcoglycan (3C5): sc-293469**, our highly recommended monoclonal alternative to  $\gamma$ -sarcoglycan (D-18).