

# SMPX (S-14): sc-240906

## BACKGROUND

SMPX (small muscle protein, X-linked), also known as SRMX, is an 86 amino acid protein that is preferentially expressed at high levels in heart and skeletal muscle where it is thought to play a role in muscle structure during growth, repair and adaptation. Defects in the gene encoding SMPX, which maps to human chromosome X, may play a role in the development of X-linked cardiac or muscle disorders. Chromosome X, one of the two human sex chromosomes, contains nearly 153 million base pairs and encodes over 1,000 genes. In conjunction with chromosome Y, chromosome X is responsible for sex determination, as an X and a Y chromosome lead to normal male development, while two copies of an X chromosome lead to normal female development. There are a number of conditions related to an abnormal number and combination of sex chromosomes, some of which include Turner's syndrome, color blindness, hemophilia and Duchenne muscular dystrophy.

## REFERENCES

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- Kemp, T.J., et al. 2001. Identification of a novel stretch-responsive skeletal muscle gene (Smpx). *Genomics* 72: 260-271.
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## CHROMOSOMAL LOCATION

Genetic locus: SMPX (human) mapping to Xp22.12; Smpx (mouse) mapping to X F4.

## SOURCE

SMPX (S-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of SMPX of human origin.

## RESEARCH USE

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

## 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-240906 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

SMPX (S-14) is recommended for detection of SMPX of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

SMPX (S-14) is also recommended for detection of SMPX in additional species, including bovine and porcine.

Suitable for use as control antibody for SMPX siRNA (h): sc-90898, SMPX siRNA (m): sc-153637, SMPX shRNA Plasmid (h): sc-90898-SH, SMPX shRNA Plasmid (m): sc-153637-SH, SMPX shRNA (h) Lentiviral Particles: sc-90898-V and SMPX shRNA (m) Lentiviral Particles: sc-153637-V.

Molecular Weight (predicted) of SMPX: 10 kDa.

Molecular Weight (observed) of SMPX: 12 kDa.

Positive Controls: Human fetal muscle tissue extract.

## 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) 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.

## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## PROTOCOLS

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