

# SPC12 (Y-12): sc-100168

## BACKGROUND

SPC12 (signal peptidase complex subunit 1), also known as microsomal signal peptidase 12 kDa subunit, is a 102 amino acid multi-pass microsome membrane protein. SPC12 is a component of the microsomal signal peptidase complex, which consists of SPCS2, SPCS3, SEC11A and SEC11C. The microsomal signal peptidase complex removes signal peptides from proteins as they are transported into the lumen of the endoplasmic reticulum. The gene that encodes SPC12 maps to human chromosome 3, which is made up of about 214 million bases encoding over 1,100 genes. Notably, there is a chemokine receptor gene cluster and a variety of human cancer related loci on chromosome 3. Particular regions of the chromosome 3 short arm are deleted in many types of cancer cells. Key tumor suppressing genes on chromosome 3 encode apoptosis mediator RASSF1, cell migration regulator HYAL1 and angiogenesis suppressor SEMA3B. Marfan syndrome, porphyria, von Hippel-Lindau syndrome, osteogenesis imperfecta and Charcot-Marie-Tooth disease are a few of the numerous genetic diseases associated with chromosome 3.

## REFERENCES

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- Braga, E.A., et al. 2003. New tumor suppressor genes in hot spots of human chromosome 3: new methods of identification. *Mol. Biol.* 37: 194-211.
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- Darai, E., et al. 2005. Evolutionarily plastic regions at human 3p21.3 coincide with tumor breakpoints identified by the "elimination test". *Genomics* 86: 1-12.
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## CHROMOSOMAL LOCATION

Genetic locus: SPCS1 (human) mapping to 3p21.1; Spcs1 (mouse) mapping to 14 B.

## SOURCE

SPC12 (Y-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within a cytoplasmic domain of SPC12 of human origin.

## STORAGE

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

## 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-100168 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

SPC12 (Y-12) is recommended for detection of SPC12 of mouse 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); non cross-reactive with other SPC family members.

SPC12 (Y-12) is also recommended for detection of SPC12 in additional species, including bovine, porcine and avian.

Suitable for use as control antibody for SPC12 siRNA (h): sc-78443, SPC12 siRNA (m): sc-153729, SPC12 shRNA Plasmid (h): sc-78443-SH, SPC12 shRNA Plasmid (m): sc-153729-SH, SPC12 shRNA (h) Lentiviral Particles: sc-78443-V and SPC12 shRNA (m) Lentiviral Particles: sc-153729-V.

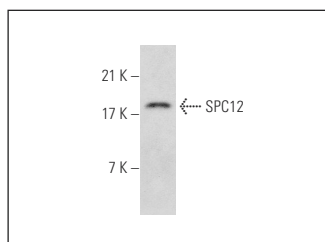
Molecular Weight of SPC12: 12 kDa.

Positive Controls: mouse kidney extract: sc-2255.

## 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



SPC12 (Y-12): sc-100168. Western blot analysis of SPC12 expression in mouse kidney tissue extract.

## RESEARCH USE

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