

# Sg V (P-19): sc-69238

## BACKGROUND

Sg V (secretogranin V), also known as SCG5, SGNE1 or 7B2, is a 212 amino acid protein that is secreted by endocrine and neuroendocrine secretory granules and belongs to the 7B2 family. Existing as two alternatively spliced isoforms, Sg V interacts with PC2 and, via this interaction, functions as a molecular chaperone for PC2, effectively preventing its premature activation in regulated secretory pathways. More specifically, Sg V binds to PC2 and facilitates its transport from the endoplasmic reticulum to secretory compartments, thus allowing PC2 to be cleaved and activated during the correct phase of the regulated secretory pathway. Sg V is subject to post-translational sulfation on specific tyrosine residues and is underexpressed in medulloblastomas, suggesting a role in tumor suppression. The gene encoding Sg V maps to human chromosome 15, which houses over 700 genes and comprises nearly 3% of the human genome.

## REFERENCES

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- Benjannet, S., Savaria, D., Chretien, M. and Seidah, N.G. 1995. 7B2 is a specific intracellular binding protein of the prohormone convertase PC2. *J. Neurochem.* 64: 2303-2311.
- Braks, J.A., Broers, C.A., Danger, J.M. and Martens, G.J. 1996. Structural organization of the gene encoding the neuroendocrine chaperone 7B2. *Eur. J. Biochem.* 236: 60-67.
- Mbikay, M., Seidah, N.G. and Chretien, M. 2001. Neuroendocrine secretory protein 7B2: structure, expression and functions. *Biochem. J.* 357: 329-342.
- Taupenot, L., Harper, K.L. and O'Connor, D.T. 2003. The chromogranin-secretogranin family. *N. Engl. J. Med.* 348: 1134-1149.

## CHROMOSOMAL LOCATION

Genetic locus: SCG5 (human) mapping to 15q13.3; Scg5 (mouse) mapping to 2 E4.

## SOURCE

Sg V (P-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Sg V 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.

Blocking peptide available for competition studies, sc-69238 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

Sg V (P-19) is recommended for detection of Sg V 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).

Sg V (P-19) is also recommended for detection of Sg V in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for Sg V siRNA (h): sc-76489, Sg V siRNA (m): sc-76490, Sg V shRNA Plasmid (h): sc-76489-SH, Sg VshRNA Plasmid (m): sc-76490-SH, Sg V shRNA (h) Lentiviral Particles: sc-76489-V and Sg V shRNA (m) Lentiviral Particles: sc-76490-V.

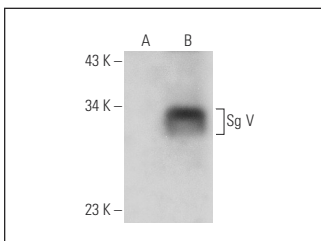
Molecular Weight of Sg V: 21 kDa.

Positive Controls: Sg V (m): 293T Lysate: sc-127531.

## 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



Sg V (P-19): sc-69238. Western blot analysis of Sg V expression in non-transfected: sc-117752 (A) and mouse Sg V transfected: sc-127531 (B) 293T whole cell lysates.

## 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.