

Sec31A (H-143): sc-98523

BACKGROUND

WD-repeats are motifs that are found in a variety of proteins and are characterized by a conserved core of 40-60 amino acids that commonly form a tertiary propeller structure. While proteins that contain WD-repeats participate in a wide range of cellular functions, they are generally involved in regulatory mechanisms concerning chromatin assembly, cell cycle control, signal transduction, RNA processing, apoptosis and vesicular trafficking. Sec31A, also known as ABP125, ABP130 or SEC31L1, is a 1,220 amino acid protein that contains seven WD-repeats and localizes to the cytoplasm and to cytoplasmic vesicles, as well as to the membrane of the endoplasmic reticulum (ER). Expressed ubiquitously at high levels, Sec31A functions as a component of the COP II (coat protein II) complex and, working in tandem with other proteins, promotes the formation of ER transport vesicles and aids in the selection of cargo molecules. Chromosomal aberrations that involve the Sec31A gene are associated with inflammatory myofibroblastic tumors (IMTs), suggesting a role for Sec31A in carcinogenesis. Multiple isoforms of Sec31A exist due to alternative splicing events.

REFERENCES

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2. Tang, B.L., et al. 2000. Mammalian homologues of yeast Sec31p. An ubiquitously expressed form is localized to endoplasmic reticulum (ER) exit sites and is essential for ER-Golgi transport. *J. Biol. Chem.* 275: 13597-13604.
3. Kirchhausen, T. 2000. Three ways to make a vesicle. *Nat. Rev. Mol. Cell Biol.* 1: 187-198.
4. Panagopoulos, I., et al. 2006. Fusion of the SEC31L1 and ALK genes in an inflammatory myofibroblastic tumor. *Int. J. Cancer.* 118: 1181-1186.
5. Yamasaki, A., et al. 2006. The Ca²⁺-binding protein ALG-2 is recruited to endoplasmic reticulum exit sites by Sec31A and stabilizes the localization of Sec31A. *Mol. Biol. Cell.* 17: 4876-4887.
6. Stagg, S.M., et al. 2006. Structure of the Sec13/31 COP II coat cage. *Nature* 439: 234-238.

CHROMOSOMAL LOCATION

Genetic locus: SEC31A (human) mapping to 4q21.22; Sec31a (mouse) mapping to 5 E4.

SOURCE

Sec31A (H-143) is a rabbit polyclonal antibody raised against amino acids 429-571 mapping within an internal region of Sec31A 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.

STORAGE

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

APPLICATIONS

Sec31A (H-143) is recommended for detection of Sec31A 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).

Sec31A (H-143) is also recommended for detection of Sec31A in additional species, including equine, canine, bovine and porcine.

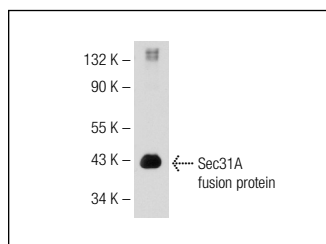
Suitable for use as control antibody for Sec31A siRNA (h): sc-89169, Sec31A siRNA (m): sc-106540, Sec31A shRNA Plasmid (h): sc-89169-SH, Sec31A shRNA Plasmid (m): sc-106540-SH, Sec31A shRNA (h) Lentiviral Particles: sc-89169-V and Sec31A shRNA (m) Lentiviral Particles: sc-106540-V.

Molecular Weight of Sec31A: 150 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



Sec31A (H-143): sc-98523. Western blot analysis of human recombinant Sec31A fusion protein.

RESEARCH USE

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

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Try **Sec31A (H-2): sc-376587** or **Sec31A (32): sc-136233**, our highly recommended monoclonal alternatives to Sec31A (H-143).