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## Product Information

### Anti-Sec23

produced in rabbit, affinity isolated antibody

Catalog Number **S7696**

#### Product Description

Anti-Sec23 is produced in rabbit using as immunogen a synthetic peptide corresponding to amino acid residues 1-18 of human Sec23A with C-terminal added cysteine conjugated to KLH. The corresponding sequence is identical in rat and mouse and differs by one amino acid in human and mouse Sec23B. The antibody is affinity-purified using the immunizing peptide immobilized on agarose.

Anti-Sec23 recognizes human, mouse, and rat Sec23. Applications include immunoblotting (~75 kDa) and immunofluorescence. Detection of the Sec23 band by immunoblotting is specifically inhibited by the immunizing peptide.

Sec23A is a component of the COPII coat that covers endoplasmic reticulum (ER)-derived vesicles involved in the transport from the ER to the Golgi apparatus. The two Sec23 isoforms, Sec23A and Sec23B, are 85% identical in amino acid sequence. Sec23A is mainly found in the ribosome-free transitional face of the ER and associated vesicles.<sup>1</sup>

Two coat proteins, COPI and COPII, are responsible for the formation of vesicles from donor membranes. Transport between the ER and Golgi is mediated by sequential action of the COPII and COPI coat complexes.<sup>2</sup> COPII subunits are recruited to the ER membrane where they mediate cargo selection and membrane deformation to generate coated vesicle formation. COPII is composed of at least five proteins: the Sec23/24 complex, the Sec13/31 complex and Sar1 GTPase. Sec23 is a Sar1-specific GTPase-activating protein, Sec24 functions in cargo selection, and Sec13/31 has a structural role.<sup>3</sup> COPII proteins coat specific regions of the ER membrane, known as COPII-coated ER exit sites or transitional ER.<sup>4,5</sup>

Anti-Sec23 may be used as a marker for COPII coated vesicles.

#### Reagent

Supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide.

Antibody concentration: ~1 mg/mL

#### Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

#### Storage/Stability

For continuous use, store at 2-8 °C for up to one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing, or storage in "frost-free" freezers, is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilutions should be discarded if not used within 12 hours.

#### Product Profile

Immunoblotting: a working concentration of 1-2 µg/mL is recommended using whole extracts of mouse NIH-3T3 and rat ROS cells, applying a chemiluminescent detection reagent.

Indirect immunofluorescence: a working concentration of 5-10 µg/mL is recommended using human HeLa cells.

**Note:** In order to obtain the best results using various techniques and preparations, we recommend determining the optimal working dilutions by titration.

#### References

1. Paccaud, J.P., et al., *Mol. Biol. Cell*, **7**, 1535-1546 (1996).
2. Aridor, M., et al., *J. Cell Biol.*, **131**, 875-893 (1995).
3. Stagg, S.M., et al., *Nature*, **439**, 234-238 (2006).
4. Orci, L., et al., *Proc. Natl. Acad. Sci. USA*, **88**, 8611-8615 (1991).
5. Stephens, D. J., *EMBO rep.*, **4**, 210-217 (2003).

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