Technical Data Sheet

# FITC Mouse Anti-Sec31A

## Product Information

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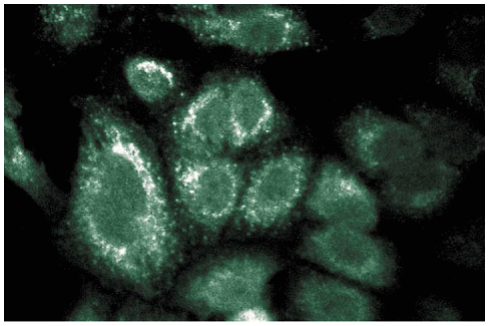
| **Material Number:** | **612474** |
| **Size:** | 50 µg |
| **Concentration:** | 250 µg/ml |
| **Clone:** | 32/Sec31A |
| **Immunogen:** | Human Sec31A aa. 522-719 |
| **Isotype:** | Mouse IgG1 |
| **Reactivity:** | QC Testing: Human |
| **Target MW:** | 148 kDa |
| **Storage Buffer:** | Aqueous buffered solution containing BSA, glycerol, and ≤0.09% sodium azide. |

## Description

Eukaryotic protein trafficking involves packaging of target molecules into membranous vesicles that bud from a donor compartment, travel to a specific destination, fuse, and release their contents into an acceptor compartment. Vesicles that bud from the Golgi cisternae and from the ER contain a non-clathrin based coat. This coat is an oligomeric complex whose subunits are termed COPs (coatomer proteins). COPI is the golgi- and endosome-associated COP complex, while COPII is the ER-associated coat complex. In yeast, the COPII complex has a cargo binding subcomplex that includes Sar1p, Sec23p, and Sec24p, which recruits Sec13p and Sec31p leading to vesicle formation. The human homologues of Sec31p are Sec31A and Sec31B. Sec31A has 40% identity with Sec31B, and contains an N-terminal WD-40 domain and a C-terminal proline-rich region. Sec31A mRNA is widely expressed, while Sec31B is found only in testis and thymus. In HeLa, Sec31A localizes to vesicular structures in the perinuclear region of the cell, and co-localizes with the COPII component Sec13. Antibodies against Sec31A inhibit ER to Golgi transport of vesicular stomatitis G protein. Thus, Sec31 may be an important COPII component involved in ER to Golgi transport, as well as a marker for COPII vesicles.



***Immunofluorescent staining of HeLa cells with anti-Sec31A antibody.***

## Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.
The antibody was conjugated with FITC under optimum conditions, and unreacted FITC was removed.
Store undiluted at -20°C and protected from prolonged exposure to light. Do not freeze.

## Application Notes

**Application**

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| Immunofluorescence | Routinely Tested |

## Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
4. Source of all serum proteins is from USDA inspected abattoirs located in the United States.

## References

Tang BL, Ong YS, Huang B, et al. A membrane protein enriched in endoplasmic reticulum exit sites interacts with COPII. *J Biol Chem.* 2001; 276(43):40008-40017.(Biology)
Tang BL, Zhang T, Low DY, Wong ET, Horstmann H, Hong W. 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.* 2000; 275(18):13597-13604.(Biology)

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