

**Synaptotagmin-3 Antibody**  
**Synaptotagmin 3 Antibody, Clone S278-19**  
**Catalog # ASM10260**

## Specification

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### Synaptotagmin-3 Antibody - Product Information

Application	<b>WB</b>
Primary Accession	<a href="#">O35681</a>
Other Accession	<a href="#">NP_001107588.1</a>
Host	<b>Mouse</b>
Isotype	<b>IgG1</b>
Reactivity	<b>Human, Mouse, Rat</b>
Clonality	<b>Monoclonal</b>

#### Description

Mouse Anti-Mouse Synaptotagmin-3 Monoclonal IgG1

#### Target/Specificity

Detects ~75kDa. Does not cross-react with other Synaptotagmins.

#### Other Names

SYT-3 Antibody, SYT3 Antibody, Synaptotagmin 3 Antibody, Synaptotagmin III Antibody, SytIII Antibody, Syt III Antibody, Synaptotagmin3 Antibody, SynaptotagminIII Antibody

#### Immunogen

Fusion protein amino acids 442-533 (Cytoplasmic C2B domain) of mouse Synaptotagmin-3

#### Purification

Protein G Purified

Storage **-20°C**

#### Storage Buffer

PBS pH7.4, 50% glycerol, 0.09% sodium azide

Shipping Temperature **Blue Ice or 4°C**

#### Certificate of Analysis

1 µg/ml of SMC-426 was sufficient for detection of Synaptotagmin-3 in 20 µg of rat brain lysate by colorimetric immunoblot analysis using Goat anti-mouse IgG:HRP as the secondary antibody.

#### Cellular Localization

Cytoplasmic Vesicle | Secretory Vesicle | Synaptic Vesicle Membrane

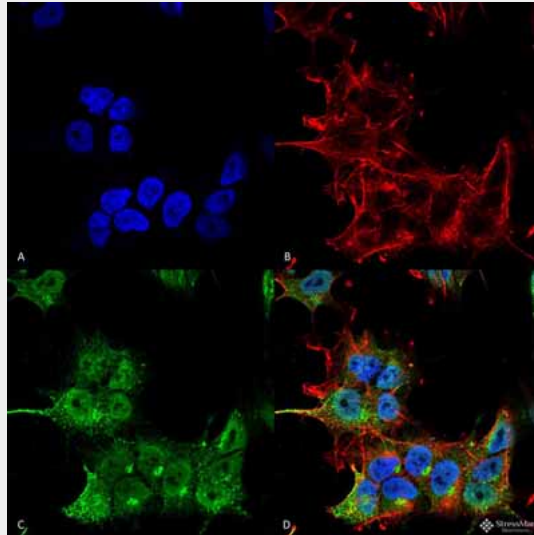
### Synaptotagmin-3 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

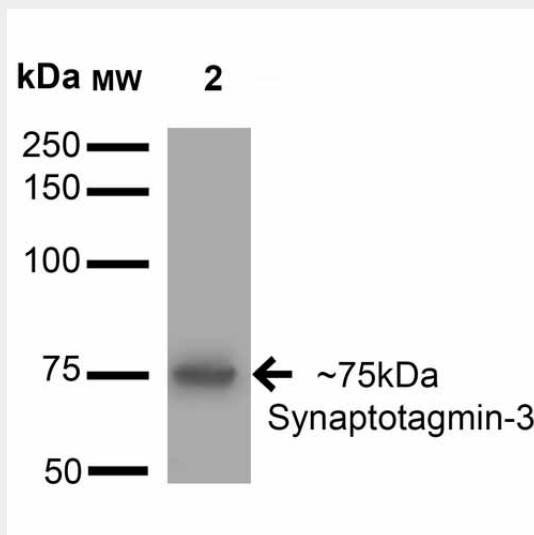
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)

- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

### Synaptotagmin-3 Antibody - Images



Immunocytochemistry/Immunofluorescence analysis using Mouse Anti-Synaptotagmin-3 Monoclonal Antibody, Clone S278-19 (ASM10260). Tissue: Neuroblastoma cell line (SK-N-BE). Species: Human. Fixation: 4% Formaldehyde for 15 min at RT. Primary Antibody: Mouse Anti-Synaptotagmin-3 Monoclonal Antibody (ASM10260) at 1:100 for 60 min at RT. Secondary Antibody: Goat Anti-Mouse ATTO 488 at 1:100 for 60 min at RT. Counterstain: Phalloidin Texas Red F-Actin stain; DAPI (blue) nuclear stain at 1:1000; 1:5000 for 60 min RT, 5 min RT. Localization: Cytoplasmic Vesicle, Secretory Vesicle, Synaptic Vesicle Membrane, Nucleus. Magnification: 60X. (A) DAPI (blue) nuclear stain (B) Phalloidin Texas Red F-Actin stain (C) Synaptotagmin-3 Antibody (D) Composite.



Western Blot analysis of Rat Brain Membrane showing detection of ~75 kDa Synaptotagmin-3 protein using Mouse Anti-Synaptotagmin-3 Monoclonal Antibody, Clone S278-19 (ASM10260). Lane 1: Molecular Weight Ladder. Lane 2: Rat Brain Membrane. Load: 15 µg. Block: 2% BSA and 2% Skim Milk in 1X TBST. Primary Antibody: Mouse Anti-Synaptotagmin-3 Monoclonal Antibody

(ASM10260) at 1:200 for 16 hours at 4°C. Secondary Antibody: Goat Anti-Mouse IgG: HRP at 1:1000 for 1 hour RT. Color Development: ECL solution for 6 min in RT. Predicted/Observed Size: ~75 kDa.

### **Synaptotagmin-3 Antibody - Background**

Synaptotagmins constitute a family of membrane-trafficking proteins that are characterized by an N-terminal transmembrane region (TMR), a variable linker, and two C-terminal C2 domains - C2A and C2B. There are 15 members in the mammalian synaptotagmin family. There are several C2-domain containing protein families that are related to synaptotagmins, including transmembrane (Ferlins, E-Syts, and MCTPs) and soluble (RIMs, Munc13s, synaptotagmin-related proteins and B/K) proteins. The synaptotagmins are integral membrane proteins of synaptic vesicles thought to serve as Ca(2+) sensors in the process of vesicular trafficking and exocytosis. Calcium binding to synaptotagmin participates in triggering neurotransmitter release at the synapse. The first domain mediates Ca(2+)-dependent phospholipid binding. The second C2 domain mediates interaction with Stonin 2. Synaptotagmin may have a regulatory role in the membrane interactions during trafficking of synaptic vesicles at the active zone of the synapse. It binds acidic phospholipids with a specificity that requires the presence of both an acidic head group and a diacylbackbone. A Ca(2+)-dependent interaction between synaptotagmin and putative receptors for activated protein kinase C has also been reported. It can bind to at least three additional proteins in a Ca(2+)-independent manner; these are neuexins, syntaxin and AP2.

### **Synaptotagmin-3 Antibody - References**

1. Schengrund C.L., et al. (2002) J Biol Chem. 277: 32815.
2. Reichardt L.F., et al. (1981) J Cell Biol. 91:257.