

**Synaptotagmin-12 Antibody**  
**Synaptotagmin 12 Antibody, Clone S277-7**  
**Catalog # ASM10271**

**Specification**

---

**Synaptotagmin-12 Antibody - Product Information**

Application	<b>WB</b>
Primary Accession	<a href="#">O920N7</a>
Other Accession	<a href="#">NP_598925.1</a>
Host	<b>Mouse</b>
Isotype	<b>IgG1</b>
Reactivity	<b>Human, Mouse, Rat</b>
Clonality	<b>Monoclonal</b>

**Description**

Mouse Anti-Mouse Synaptotagmin-12 Monoclonal IgG1

**Target/Specificity**

Detects ~45kDa. Does not cross-react with Synaptotagmin-6 or other Synaptotagmins.

**Other Names**

SYT-12 Antibody, SYT12 Antibody, Synaptotagmin 12 Antibody, Synaptotagmin XII Antibody, SytXII Antibody, Syt XII Antibody, Synaptotagmin12 Antibody, SynaptotagminXII Antibody

**Immunogen**

Fusion protein amino acids 168-255 (Cytoplasmic C2A domain) of mouse Synaptotagmin-12

**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-437 was sufficient for detection of Synaptotagmin-12 in 20 µg of transiently overexpressing synaptotagmin-12 COS cell lysate by colorimetric immunoblot analysis using Goat anti-mouse IgG:HRP as the secondary antibody.

**Cellular Localization**

Cytoplasmic Vesicle

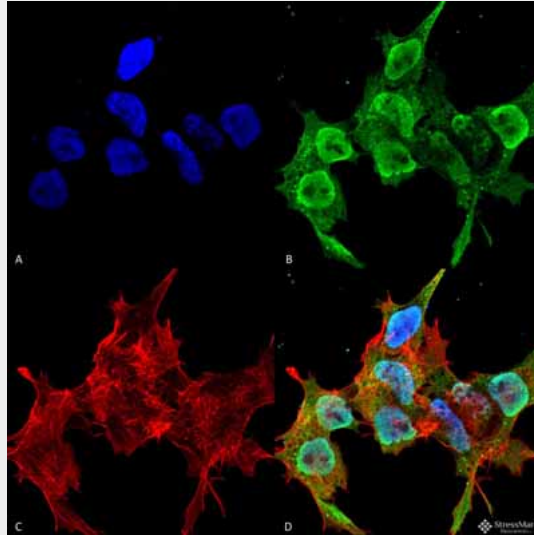
**Synaptotagmin-12 Antibody - Protocols**

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

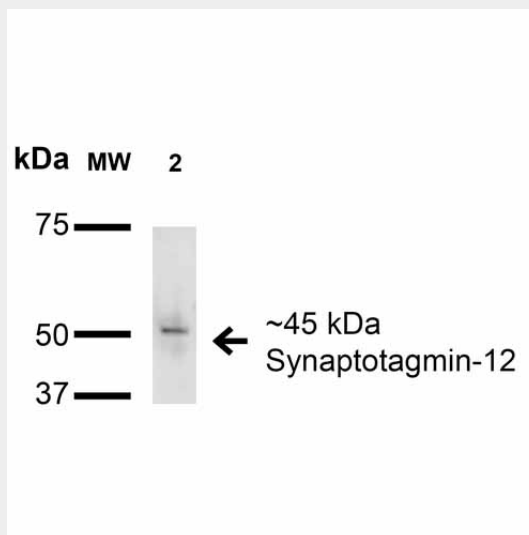
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)

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

### Synaptotagmin-12 Antibody - Images



Immunocytochemistry/Immunofluorescence analysis using Mouse Anti-Synaptotagmin-12 Monoclonal Antibody, Clone S277-7 (ASM10271). Tissue: Neuroblastoma cell line (SK-N-BE). Species: Human. Fixation: 4% Formaldehyde for 15 min at RT. Primary Antibody: Mouse Anti-Synaptotagmin-12 Monoclonal Antibody (ASM10271) 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, Cytoplasm, Nucleus. Magnification: 60X. (A) DAPI (blue) nuclear stain (B) Phalloidin Texas Red F-Actin stain (C) Synaptotagmin-12 Antibody (D) Composite.



Western Blot analysis of Monkey COS cells transfected with GFP-tagged Synaptotagmin showing detection of ~45 kDa Synaptotagmin-12 protein using Mouse Anti-Synaptotagmin-12 Monoclonal Antibody, Clone S277-7 (ASM10271). Lane 1: Molecular Weight Ladder. Lane 2: Monkey COS cells transfected with GFP-tagged Synaptotagmin. Load: 15  $\mu$ g. Block: 2% BSA and 2% Skim Milk in 1X

TBST. Primary Antibody: Mouse Anti-Synaptotagmin-12 Monoclonal Antibody (ASM10271) 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: ~45 kDa.

### **Synaptotagmin-12 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 diacyl backbone. 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 neurexins, syntaxin and AP2 (1, 2).

### **Synaptotagmin-12 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.