

DESCRIPTION

Species Reactivity	Rat
Specificity	Detects rat Synaptotagmin-1 in Western blots. Detects Synaptotagmin-1 from rat, mouse, human, chicken, Xenopus, and fish.
Source	Monoclonal Mouse IgG _{2A} Clone # ASV30
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Rat brain synaptic plasma membranes
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

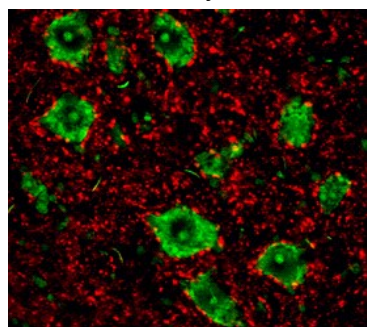
APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

	Recommended Concentration	Sample
Immunohistochemistry	8-25 µg/mL	See Below
Western Blot	Matthew, W.D. <i>et al.</i> (1981) <i>J. Cell Biol.</i> 91 :257. This application was not tested by R&D Systems.	
Immunoprecipitation	Matthew, W.D. <i>et al.</i> (1981) <i>J. Cell Biol.</i> 91 :257.	

DATA

Immunohistochemistry



Synaptotagmin-1 in Rat Spinal Cord. Synaptotagmin-1 was detected in perfusion fixed frozen sections of rat spinal cord using 8 µg/mL Mouse Anti-Rat Synaptotagmin-1 Monoclonal Antibody (Catalog # MAB43641) overnight at 4 °C. Tissue was stained (red) and counterstained (green). View our protocol for [Fluorescent IHC Staining of Frozen Tissue Sections](#).

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

The Synaptotagmins are a family of integral membrane proteins of synaptic vesicles. Rat Synaptotagmin-1 (Accession # P21707) is a 57 kDa, 421 aa glycoprotein containing two C2 domains related to protein kinase C, and sites for palmitoylation and binding of acidic phospholipids, calcium and calmodulin. Synaptotagmin-1 participates in the process of vesicular trafficking and exocytosis by inducing local Ca²⁺-dependent buckling of the plasma membrane. Rat Synaptotagmin-1 shares 98% aa identity or greater with mouse, human and bovine Synaptotagmin-1.