

**DESCRIPTION**

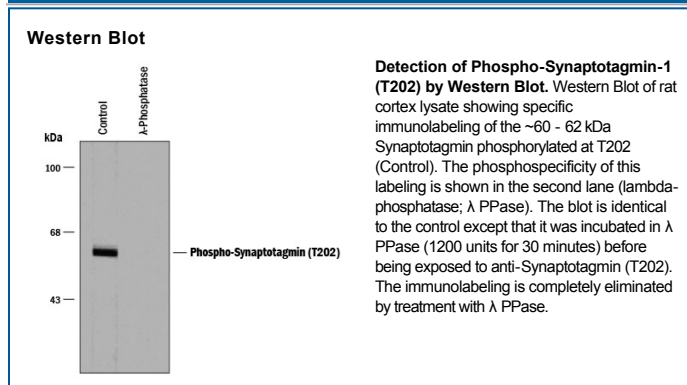
<b>Species Reactivity</b>	Human/Mouse/Rat/Bovine/Canine/Chicken/Primate/Zebrafish
<b>Specificity</b>	Rat Synaptotagmin phosphorylated at T202
<b>Source</b>	Polyclonal Rabbit IgG
<b>Purification</b>	Antigen Affinity-purified
<b>Immunogen</b>	Phosphopeptide corresponding to amino acid residues surrounding the phospho-T202 of Synaptotagmin-1
<b>Formulation</b>	100 µL in 10 mM HEPES (pH 7.5), 150 mM NaCl, 100 µg/mL BSA, and 50% glycerol. See Certificate of Analysis for details.

**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.

	<b>Recommended Concentration</b>	<b>Sample</b>
<b>Western Blot</b>	1:1000 dilution	See Below

**DATA**



**PREPARATION AND STORAGE**

<b>Shipping</b>	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
<b>Stability &amp; Storage</b>	For long-term storage, ≤ -20° C is recommended. Product is stable at ≤ -20° C for at least 1 year.

**BACKGROUND**

Synaptotagmins are integral membrane proteins of synaptic vesicles. Synaptotagmin-1 is a glycoprotein containing two C2 domains related to protein kinase C and sites for calcium-dependent binding of acidic phospholipids. Synaptotagmin-1 participates in the process of vesicular trafficking and exocytosis by inducing local calcium-dependent buckling of the plasma membrane. Synaptotagmin-2 is a single-pass, type Ia/III (no signal sequence) transmembrane (TM) glycoprotein. Synaptotagmin-2 is an integral component of neurotransmitter-containing synaptic vesicles that detects action potential-induced increases in presynaptic cytosolic calcium. Increased ionic calcium binds to synaptotagmin II at two sites (C2a and C2b) on its cytoplasmic tail. The first site also binds phospholipid, while the second site binds syntaxin. This promotes vesicle membrane fusion with the presynaptic plasma membrane, resulting in neurotransmitter release.

Synaptotagmins undergo three types of posttranslational modification that may affect function. N-linked glycosylation and/or O-linked glycosylation are likely necessary for recycling (internalization) of vesicle membrane after neurotransmitter release. Fatty acylation/palmitoylation of synaptotagmin may be necessary for proper cycling. Finally, synaptotagmin phosphorylation within the C2a site regulates calcium-binding, while phosphorylation in the C2b site may regulate calcium and syntaxin interaction.