

**SYNGR1 Antibody**

**Orders:** 877-616-CELL (2355)  
orders@cellsignal.com

**Support:** 877-678-TECH (8324)

**Web:** info@cellsignal.com  
cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

**For Research Use Only. Not for Use in Diagnostic Procedures.**

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	H M R	Endogenous	28	Rabbit	#O43759	9145

**Product Usage Information****Application**

Western Blotting

**Dilution**

1:1000

**Storage**

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at -20°C. Do not aliquot the antibody.

**Specificity/Sensitivity**

SYNGR1 Antibody recognizes endogenous levels of total synaptogyrin-1 protein.

**Source / Purification**

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Tyr214 of human synaptogyrin-1 protein. Antibodies are purified by peptide affinity chromatography.

**Background**

Synaptogyrin, or SYNGR, are a family of tyrosine-phosphorylated proteins, including neuronal SYNGR1 and SYNGR3 that are found in synaptic vesicles and contribute to the proper synapse function. Synaptogyrin-2 (SYNGR2) expresses ubiquitously and it is not only associated with synaptic vesicles, but also plays an important role in exocytosis processes (1,3). In addition, it has been shown that SYNGRs modulate calcium currents in excitable cells during potassium chloride-dependent exocytosis (3). SYNGR3 and SYNGR1 specifically localize in synaptic vesicles. SYNGR1 modulates synaptic vesicle function similar to SYNGR3 (2,3). SYNGR1 and SYNGR3 contribute to the neurotransmitter release in neurons by interactions with the GABA and VGLUT transporters in primary neurons and in *C. elegans* (4-6). SYNGRs are associated with disease including Schizophrenia (7,8) and Alzheimer's disease (9,10).

**Background References**

1. Kedra, D. et al. (1998) *Hum Genet* 103, 131-41.
2. Janz, R. et al. (1999) *Neuron* 24, 687-700.
3. Sugita, S. et al. (1999) *J Biol Chem* 274, 18893-901.
4. Belizaire, R. et al. (2004) *J Comp Neurol* 470, 266-81.
5. Bragina, L. et al. (2010) *Neuroscience* 165, 934-43.
6. Abraham, C. et al. (2011) *Neuroscience* 190, 75-88.
7. Verma, R. et al. (2005) *J Hum Genet* 50, 635-40.
8. Cheng, M.C. and Chen, C.H. (2007) *J Psychiatr Res* 41, 1027-31.
9. Liu, C. et al. (2016) *J Biol Chem* 291, 8173-88.
10. McInnes, J. et al. (2018) *Neuron* 97, 823-835.e8.

**Species Reactivity**

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

**Western Blot Buffer**

**IMPORTANT:** For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

**Applications Key**

**W:** Western Blotting

**Cross-Reactivity Key**

**H:** Human **M:** Mouse **R:** Rat

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