

SynCAM 3

Cat.No. 243-3P; control peptide, 100 µg peptide (lyophilized)

Data Sheet

Reconstitution/ Storage	100 µg peptide, lyophilized. For reconstitution add 100 µl H ₂ O to get a 1mg/ml solution in PBS. Then aliquot and store at -20°C until use. Control peptides should also be stored at -20°C when still lyophilized!
Immunogen	Synthetic peptide corresponding to AA 171 to 185 from mouse SynCAM3 (UniProt Id: Q99N28)
Recommended dilution	Optimal concentrations should be determined by the end-user.
matching antibodies	243 303
Remarks	This control peptide consists of the synthetic peptide (aa 171 - 185 of mouse synCAM 3) that has been used for immunization. It has been tested in preadsorption experiments and blocks efficiently and specifically the corresponding signal in Western blots. The amount of peptide needed for efficient blocking depends on the titer and on the affinity of the antibody to the antigen.

TO BE USED IN VITRO / FOR RESEARCH ONLY NOT TOXIC, NOT HAZARDOUS, NOT INFECTIOUS, NOT CONTAGIOUS

Development of synapses involves transsynaptic interactions of dedicated synaptic adhesion molecules like neuroligins, neuexins and synCAMs (**S**ynaptic cell **a**dhesion **m**olecules). Four SynCAM isoforms have been described so far. All share a common domain structure and contain three extracellular Ig domains, a single transmembrane region, and a short COOH-terminal cytoplasmic tail. **SynCAM 2** has been shown to be associated to myelinated axons and **synCAM 3** can serve as a receptor for herpes viruses.

Selected General References

- Aberrations of a cell adhesion molecule CADM4 in renal clear cell carcinoma.
Nagata M, Sakurai-Yageta M, Yamada D, Goto A, Ito A, Fukuhara H, Kume H, Morikawa T, Fukayama M, Homma Y, Murakami Y, et al.
International journal of cancer (2012) 130(6): 1329-37.
- Localization of Cadm2a and Cadm3 proteins during development of the zebrafish nervous system.
Hunter PR, Nikolaou N, Odermatt B, Williams PR, Drescher U, Meyer MP
The Journal of comparative neurology (2011) 519(11): 2252-70.
- The cell adhesion nectin-like molecules (Necl) 1 and 4 suppress the growth and tumorigenic ability of colon cancer cells.
Raveh S, Gavert N, Spiegel I, Ben-Ze'ev A
Journal of cellular biochemistry (2009) 108(1): 326-36.
- The adhesion molecule Necl-3/SynCAM-2 localizes to myelinated axons, binds to oligodendrocytes and promotes cell adhesion.
Pellissier F, Gerber A, Bauer C, Ballivet M, Ossipov V
BMC neuroscience (2007) 8: 90.
- Nectin-like proteins mediate axon Schwann cell interactions along the internode and are essential for myelination.
Maurel P, Einheber S, Galinska J, Thaker P, Lam I, Rubin MB, Scherer SS, Murakami Y, Gutmann DH, Salzer JL
The Journal of cell biology (2007) 178(5): 861-74.
- SynCAMs organize synapses through heterophilic adhesion.
Fogel AI, Akins MR, Krupp AJ, Stagi M, Stein V, Biederer T
The Journal of neuroscience : the official journal of the Society for Neuroscience (2007) 27(46): 12516-30.
- Crystal structure of the V domain of human Nectin-like molecule-1/Syncam3/Tsll1/Igsf4b, a neural tissue-specific immunoglobulin-like cell-cell adhesion molecule.
Dong X, Xu F, Gong Y, Gao J, Lin P, Chen T, Peng Y, Qiang B, Yuan J, Peng X, Rao Z, et al.
The Journal of biological chemistry (2006) 281(15): 10610-7.
- Nectin-like molecule-1/TSLL1/SynCAM3: a neural tissue-specific immunoglobulin-like cell-cell adhesion molecule localizing at non-junctional contact sites of presynaptic nerve terminals, axons and glia cell processes.
Kakunaga S, Ikeda W, Itoh S, Deguchi-Tawarada M, Ohtsuka T, Mizoguchi A, Takai Y
Journal of cell science (2005) 118(Pt 6): 1267-77.
- SynCAM, a synaptic adhesion molecule that drives synapse assembly.
Biederer T, Sara Y, Mozhayeva M, Atasoy D, Liu X, Kavalali ET, Südhof TC
Science (New York, N.Y.) (2002) 297(5586): 1525-31.