

Rudolf-Wissell-Str. 28 37079 Göttingen, Germany

Phone: +49 551-50556-0
Fax: +49 551-50556-384
E-mail: sales@sysy.com
Web: www.sysy.com

Rab 3c

Cat.No. 107 203; Polyclonal rabbit antibody, 50 µg specific antibody (lyophilized)

Data Sheet

Reconstitution/ Storage	50 μg specific antibody, lyophilized. Affinity purified with the immunogen. Rabbit serum albumin was added for stabilization. For reconstitution add 50 μl H ₂ O to get a 1mg/ml solution in PBS. Then aliquot and store at -20°C until use.
Applications	WB: 1: 1000 (AP staining) IP: yes ICC: 1: 500 IHC: not tested yet IHC-P/FFPE: not tested yet
Immunogen	Recombinant protein corresponding to AA 154 to 227 from human Rab3c (UniProt Id: Q96E17)
Reactivity	Reacts with: human (Q96E17), rat (P62824), mouse (P62823), monkey, cow. No signal: zebrafish. Other species not tested yet.
Specificity	Specific for Rab 3c.
Remarks	This antibody has been affinity purified with a peptide consisting only of the Rab 3c specific epitope NTRLKETPPPPQPN (aa 211 - 224) of the human protein.

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

Rab 3 is a member of the Rab protein family that belongs to the ras-related superfamily of small monomeric GTPases. Four related isoforms of Rab 3 are known (**Rab 3a**, 3b, **3c**, and **3d**). Rab 3a and 3c are predominantly expressed in neurons and neuroendocrine cells where they are localized to synaptic vesicles. Unlike the integral membrane proteins of synaptic vesicles, Rab 3a/c is absent from the Golgi complex and thus does not result in immunostaining of the axo-dendritic region as sometimes seen with e.g. synaptophysin, synaptobrevin/VAMP, or synaptogyrin. Rab 3b and 3d are expressed in non-neuronal tissues such as adipocytes and the exocrine pancreas (3d). It has been shown that overexpression of Rab 3 inhibits Ca²⁺ regulated excocytosis and converts it into an constitutive Ca²⁺ independent exocytosis mechanism.

Selected References SYSY Antibodies

Quantitative analysis of synaptic vesicle Rabs uncovers distinct yet overlapping roles for Rab3a and Rab27b in Ca2+-triggered exocytosis.

Pavlos NJ, Grønborg M, Riedel D, Chua JJ, Boyken J, Kloepper TH, Urlaub H, Rizzoli SO, Jahn R

The Journal of neuroscience: the official journal of the Society for Neuroscience (2010) 30(40): 13441-53. WB

SNARE Complex-associated Proteins in the Lateral Amygdala of Macaca mullatta Following Long-term Ethanol Drinking. Alexander NJ, Rau AR, Jimenez VA, Daunais JB, Grant KA, McCool BA

Alcoholism, clinical and experimental research (2018):. WB; tested species: monkey

BMS-708163 and Nilotinib restore synaptic dysfunction in human embryonic stem cell-derived Alzheimer's disease models. Nishioka H, Tooi N, Isobe T, Nakatsuji N, Aiba K

Scientific reports (2016) 6: 33427. WB

Complexin II plays a positive role in Ca2+-triggered exocytosis by facilitating vesicle priming.

Cai H, Reim K, Varoqueaux F, Tapechum S, Hill K, Sørensen JB, Brose N, Chow RH

Proceedings of the National Academy of Sciences of the United States of America (2008) 105(49): 19538-43. **WB**

Selected General References

RAB3 and synaptotagmin: the yin and yang of synaptic membrane fusion.

Geppert M, Südhof TC

Annual review of neuroscience (1998) 21: 75-95.

Dominant negative Rab3D mutants reduce GTP-bound endogenous Rab3D in pancreatic acini.

Chen X, Ernst SA, Williams JA

The Journal of biological chemistry (2003) 278(50): 50053-60.

Rab3D: a regulator of exocytosis in non-neuronal cells.

Millar AL, Pavios NJ, Xu J, Zheng MH

Histology and histopathology (2002) 17(3): 929-36.

Molecular cloning of the mouse homologue of Rab3c.

Pavlos NJ, Xu J, Papadimitriou JM, Zheng MH

Journal of molecular endocrinology (2001) 27(1): 117-22.

The small GTP-binding protein Rab3A regulates a late step in synaptic vesicle fusion.

Geppert M. Goda Y. Stevens CF. Südhof TC

Nature (1997) 387(6635): 810-4.

Characterization of Rab3A, Rab3B and Rab3C: different biochemical properties and intracellular localization in bovine chromaffin cells.

Lin CG, Lin YC, Liu HW, Kao LS

The Biochemical journal (1997) 324 (Pt 1): 85-90.

The synaptic vesicle cycle: a cascade of protein-protein interactions.

Südhof TO

Nature (1995) 375(6533): 645-53.

Synaptic vesicles and exocytosis.

Jahn R, Südhof TC

Annual review of neuroscience (1994) 17: 219-46.

Localization of Rab5 to synaptic vesicles identifies endosomal intermediate in synaptic vesicle recycling pathway. Fischer von Mollard G, Stahl B, Walch-Solimena C, Takei K, Daniels L, Khoklatchev A, De Camilli P, Südhof TC, Jahn R European journal of cell biology (1994) 65(2): 319-26.

Rab3C is a synaptic vesicle protein that dissociates from synaptic vesicles after stimulation of exocytosis. Fischer von Mollard G, Stahl B, Khokhlatchev A, Südhof TC, Jahn R

The Journal of biological chemistry (1994) 269(15): 10971-4.