

Rab 3

Cat.No. 107 003; Polyclonal rabbit antibody, 50 µg specific antibody (lyophilized)

Data Sheet

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|------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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: not tested yet ICC: 1 : 1000 IHC: 1 : 200 up to 1 : 500 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 (P20336, P20337, Q96E17, O95716), rat (P63012, Q63941, P62824, Q63942), mouse (P63011, Q9CZT8, P62823, P35276). Other species not tested yet. |
| Specificity | Specific for all four Rab 3 isoforms a, b, c, d. |
| Remarks | This antibody has been affinity purified with the complete antigen (aa 154 - 227) and recognizes all isoforms, due to the homology of Rab 3 proteins. |

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 exocytosis and converts it into an constitutive Ca²⁺ independent exocytosis mechanism.

Selected References SYSY Antibodies

A secretagogin locus of the mammalian hypothalamus controls stress hormone release. Romanov RA, Alpar A, Zhang MD, Zeisel A, Calas A, Landry M, Fuszard M, Shirran SL, Schnell R, Dobolyi Á, Oláh M, et al. The EMBO journal (2015) 34(1): 36-54. **IHC; tested species: mouse, rat**

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A new probe for super-resolution imaging of membranes elucidates trafficking pathways. Revelo NH, Kamin D, Truckenbrodt S, Wong AB, Reuter-Jessen K, Reisinger E, Moser T, Rizzoli SO The Journal of cell biology (2014) 205(4): 591-606. **ICC**

Selected General References

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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.

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Synaptic vesicles and exocytosis. Jahn R, Südhof TC Annual review of neuroscience (1994) 17: 219-46.

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