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Rabphilin 3a

Cat.No. 118 003; 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 μ l H $_2$ O to get a 1mg/ml solution of antibody in Tris buffer. Then aliquot and store at -20°C until use.
Applications	WB: 1: 1000 (AP staining) IP: not recommended ICC: not tested yet IHC: yes IHC-P/FFPE: not tested yet
Immunogen	Synthetic peptide corresponding to AA 671 to 684 from rat Rabphilin3a (UniProt Id: P47709)
Reactivity	Reacts with: human (Q9Y2J0), rat (P47709), mouse (P47708), cow. Other species not tested yet.
Specificity	Specific for rabphilin 3a.
matching control	118-0P

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

Rabphilin 3a is a putative effector protein for the low molecular weight GTP-binding protein rab 3. Rab 3 occurs in four isoforms (Rab 3a, b, c and d), all of which probably bind to rabphilin 3a when in the GTP-bound form.

Rabphilin 3a contains an N-terminal Zn^{2+} -finger sequence that is essential for binding rab 3, and two C-terminal C2 - domains that may bind Ca^{2+} . It does not have a transmembrane region.

Rabphilin 3a is primarily expressed in neurons where it is localized to synaptic vesicles. It is probably recruited to synaptic vesicles by rab 3a and 3c. The structure of rabphilin 3a and its interaction with rab 3 suggests that it may be a Ca²⁺ sensor on synaptic vesicles that is recruited to synaptic vesicles as a function of GTP by rab 3.

Selected References SYSY Antibodies

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Selected General References

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The EMBO journal (1996) 15(8): 1799-809.

Synaptic targeting of rabphilin-3A, a synaptic vesicle Ca2+/phospholipid-binding protein, depends on rab3A/3C. Li C, Takei K, Geppert M, Daniell L, Stenius K, Chapman ER, Jahn R, De Camilli P, Südhof TC Neuron (1994) 13(4): 885-98.

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