

ZnT 3

Cat.No. 197 006; Polyclonal chicken antibody, 50 µg specific antibody (lyophilized)

Data Sheet

Reconstitution/ Storage	50 µg purified IgY, lyophilized. 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. Before storing at -20°C add 1 vol of glycerol.
Applications	WB: 1 : 1000 (AP staining) (see remarks) IP: not tested yet ICC: 1 : 500 up to 1 : 1000 IHC: 1 : 500 IHC-P/FFPE: 1 : 500
Immunogen	Recombinant protein corresponding to AA 2 to 75 from mouse ZnT3 (UniProt Id: P97441)
Reactivity	Reacts with: mouse (P97441), rat (Q6QIX3). Other species not tested yet.
Specificity	Specific for ZnT 3.
matching control	197-0P
Remarks	WB: This antibody is less sensitive compared to the rabbit antibody cat. no. 197 002

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

The essential micronutrient zinc plays an important role in many biological processes like growth, development and reproduction. It is found in the active site of many enzymes, where ionization, polarization or replacement of Zn²⁺ bound water is involved in catalytic reactions. As a charged ion Zn²⁺ cannot cross biological membranes by simple diffusion and must be transported into or out of cells by specialized transport mechanisms. Four Zn transporter proteins, ZnT 1 to ZnT 4, have been cloned. All of them contain several transmembrane domains and a histidine rich intracellular loop. In the central nervous system Zn plays important roles in synaptic function and plasticity. At synapses Zn is stored in synaptic vesicles by a mechanism depending on the integral membrane protein **ZnT 3**.

Selected General References

Vglut1 and ZnT3 co-targeting mechanisms regulate vesicular zinc stores in PC12 cells.

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Molecular biology of the cell (2004) 15(2): 575-87.

Accumulation of zinc in degenerating hippocampal neurons of ZnT3-null mice after seizures: evidence against synaptic vesicle origin.

Lee JY, Cole TB, Palmiter RD, Koh JY

The Journal of neuroscience : the official journal of the Society for Neuroscience (2000) 20(11): RC79.

Elimination of zinc from synaptic vesicles in the intact mouse brain by disruption of the ZnT3 gene.

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Ultrastructural localization of zinc transporter-3 (ZnT-3) to synaptic vesicle membranes within mossy fiber boutons in the hippocampus of mouse and monkey.

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