Synaptic Systems

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

NEDD 4-1

Cat.No. 283 103; 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_2O 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**: not tested yet **IHC**: not tested yet **IHC-P/FFPE**: not tested yet
Immunogen	Recombinant protein corresponding to AA 1 to 78 from mouse NEDD4-1 (UniProt Id: P46935)
Reactivity	Reacts with: rat, mouse (Q8CFI0). Other species not tested yet.
Specificity	Specific for Nedd 4-1. (K.O. verified)

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

Nedd 4-1 (RFP 1) and its close relative **Nedd 4-2** (NEDD4L) are involved in the ubiquitination of cell surface receptores triggering their internalization and subsequent degradation.
Nedd 4-1 belongs to the most abundant E3 ubiquitin ligases in mammalian neurons. One important target for Nedd 4-1 is Rap2A a protein involved in dendrite formation.
One important target for Nedd 4-2 is the amiloride-sensitive epithelial sodium channel (ENaC) which is involved in fluid and electrolyte homeostasis.

Selected General References

Respiratory distress and perinatal lethality in Nedd4-2-deficient mice.
Boase NA, Rychkov GY, Townley SL, Dinudom A, Candi E, Voss AK, Tsoutsman T, Semsarian C, Melino G, Koentgen F, Cook DI, et al.
Nature communications (2011) 2: 287.

Nedd4-2 isoforms ubiquitinate individual epithelial sodium channel subunits and reduce surface expression and function of the epithelial sodium channel.
Raikwar NS, Thomas CP
American journal of physiology. Renal physiology (2008) 294(5): F1157-65.

Epithelial sodium channel (ENaC) is multi-ubiquitinated at the cell surface.
Wiemuth D, Ke Y, Rohlfs M, McDonald FJ
The Biochemical journal (2007) 405(1): 147-55.

The role of Nedd4/Nedd4-like dependant ubiquitylation in epithelial transport processes.
Flores SY, Debonneville C, Staub O
Pflugers Archiv : European journal of physiology (2003) 446(3): 334-8.

Regulation of the epithelial sodium channel by N4WBP5A, a novel Nedd4/Nedd4-2-interacting protein.
Konstas AA, Shearwin-Whyatt LM, Fotia AB, Degger B, Riccardi D, Cook DI, Korbmacher C, Kumar S
The Journal of biological chemistry (2002) 277(33): 29406-16.

Phosphorylation of Nedd4-2 by Sgk1 regulates epithelial Na(+) channel cell surface expression.
Debonneville C, Flores SY, Kamynina E, Plant PJ, Tauxe C, Thomas MA, Münster C, Chraïbi A, Pratt JH, Horisberger JD, Pearce D, et al.
The EMBO journal (2001) 20(24): 7052-9.

A novel mouse Nedd4 protein suppresses the activity of the epithelial Na+ channel.
Kamynina E, Debonneville C, Bens M, Vandewalle A, Staub O
FASEB journal : official publication of the Federation of American Societies for Experimental Biology (2001) 15(1): 204-214.