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ZNRF1 Rabbit pAb

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Catalog # AP59157

Product Information

Application	IHC-P, IHC-F, IF, E
Primary Accession	Q8ND25
Predicted	Human, Mouse, Rat, Chicken, Dog, Rabbit, Sheep
Host	Rabbit
Clonality	Polyclonal
Calculated MW	23783
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human ZNRF1
Epitope Specificity	121-227/227
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SUBCELLULAR LOCATION	Endosome. Lysosome. Membrane.
SIMILARITY	Contains 1 RING-type zinc finger.
SUBUNIT	Interacts with AKT1, GLUL and TUBB2A (By similarity).
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	Zinc-finger proteins contain DNA-binding domains and have a wide variety of functions, most of which encompass some form of transcriptional activation or repression. The RING-type zinc finger motif is present in a number of viral and eukaryotic proteins and is made of a conserved cysteine-rich domain that is able to bind two zinc atoms. Proteins that contain this conserved domain are generally involved in the ubiquitination pathway of protein degradation. ZNRF1 (zinc and ring finger 1), also known as NIN283, is a 227 amino acid protein that contains one RING-type zinc finger and localizes to the lysosome and the endosome, as well as to cytoplasmic vesicles and the peripheral membrane. Expressed primarily in nervous system tissue, but also present in testis and thymus, ZNRF1 functions as an E3 ubiquitin-protein ligase that is thought to play a role in the establishment and maintenance of neuronal plasticity. Multiple isoforms of ZNRF1 exist due to alternative splicing events.

Additional Information

Gene ID	84937
Other Names	E3 ubiquitin-protein ligase ZNRF1, 2.3.2.27, Nerve injury-induced gene 283 protein, RING-type E3 ubiquitin transferase ZNRF1, Zinc/RING finger protein 1, ZNRF1, NIN283
Target/Specificity	Expressed primarily in the nervous system, with expression higher in developing brain relative to adult. Expressed at low levels in testis and

	thymus.
Dilution	IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500,ELISA=1:5000-10000
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	ZNRF1
Synonyms	NIN283
Function	E3 ubiquitin-protein ligase that plays a role in different processes including cell differentiation, receptor recycling or regulation of inflammation (PubMed:28593998, PubMed:33996800, PubMed:37158982). Mediates the ubiquitination of AKT1 and GLUL, thereby playing a role in neuron cells differentiation. Plays a role in the establishment and maintenance of neuronal transmission and plasticity. Regulates Schwann cells differentiation by mediating ubiquitination of GLUL. Promotes neurodegeneration by mediating 'Lys-48'-linked polyubiquitination and subsequent degradation of AKT1 in axons: degradation of AKT1 prevents AKT1-mediated phosphorylation of GSK3B, leading to GSK3B activation and phosphorylation of DPYSL2/CRMP2 followed by destabilization of microtubule assembly in axons. Ubiquitinates the Na(+)/K(+) ATPase alpha-1 subunit/ATP1A1 and thereby influences its endocytosis and/or degradation (PubMed:22797923). Controls ligand-induced EGFR signaling via mediating receptor ubiquitination and recruitment of the ESCRT machinery (PubMed:33996800). Acts as a negative feedback mechanism controlling TLR3 trafficking by mediating TLR3 'Lys-63'-linked polyubiquitination to reduce type I IFN production (PubMed:37158982). Modulates inflammation by promoting caveolin-1/CAV1 ubiquitination and degradation to regulate TLR4-activated immune response (PubMed:28593998).
Cellular Location	Endosome. Lysosome. Membrane; Peripheral membrane protein. Cytoplasmic vesicle, secretory vesicle, synaptic vesicle membrane; Peripheral membrane protein Note=Associated with synaptic vesicle membranes in neurons
Tissue Location	Expressed primarily in the nervous system, with expression higher in developing brain relative to adult. Expressed at low levels in testis and thymus.

Background

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