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Ninjurin 1 Rabbit pAb

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Catalog # AP54376

Product Information

Application	WB, IHC-P, IHC-F, IF
Primary Accession	Q92982
Predicted	Rat, Dog, Human, Mouse, Rabbit, Chicken, Sheep
Host	Rabbit
Clonality	Polyclonal
Calculated MW	16345
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human Ninjurin 1
Epitope Specificity	1-80/152
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	Membrane; Multi-pass membrane protein.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	Ninjurin family proteins are muli-pass membrane proteins induced by nerve injury in Schwann cells and dorsal root ganglion neurons. Nunjurin proteins act as homophilic cell adhesion molecules that promote axonal growth. Ninjurin proteins also play a role in the formation and function of other tissues. Ninjurin-1 is widely expressed in adult and embryonic tissues, particularly those with epithelial origin. Ninjurin-2 is also widely expressed, with highest levels in adult bone marrow and peripheral blood lymphocytes and embryo liver, thymus and heart. The genes that encode the Ninjurin proteins map to a region known to cause several genetic disorders, including hereditary sensory neuropathy type I and type II (HSN1 and HSN2). However, no link between mutations in the genes encoding Ninjurins and the diseases have been found.

Additional Information

Gene ID	4814
Other Names	Ninjurin-1, hNINJ1, Nerve injury-induced protein 1, Secreted ninjurin-1, Soluble ninjurin-1, NINJ1 {ECO:0000303|PubMed:33472215, ECO:0000312|HGNC:HGNC:7824}
Dilution	WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,ICC/IF=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	NINJ1 {ECO:0000303|PubMed:33472215, ECO:0000312|HGNC:HGNC:7824}
Function	[Ninjurin-1]: Effector of various programmed cell death, such as pyroptosis and necroptosis, which mediates plasma membrane rupture (cytolysis) (PubMed:33472215, PubMed:36468682, PubMed:37196676, PubMed:37198476, PubMed:38614101, PubMed:39667936). Oligomerizes in response to death stimuli and forms ring-like structures on the plasma membrane: acts by cutting and shedding membrane disks, like a cookie cutter, leading to membrane damage and loss that cannot be repaired by the cell (PubMed:38614101). Plasma membrane rupture leads to release intracellular molecules named damage-associated molecular patterns (DAMPs) that propagate the inflammatory response (PubMed:33472215, PubMed:36468682, PubMed:37196676, PubMed:37198476). Mechanistically, mediates plasma membrane rupture by introducing hydrophilic faces of 2 alpha helices into the hydrophobic membrane (PubMed:37198476, PubMed:38614101). Induces plasma membrane rupture downstream of Gasdermin (GSDMA, GSDMB, GSDMC, GSDMD, or GSDME) or MLKL during pyroptosis or necroptosis, respectively (PubMed:33472215, PubMed:36468682, PubMed:37196676, PubMed:37198476). Acts as an effector of PANoptosis downstream of CASP1, CASP4, CASP8 and RIPK3 (By similarity). Also induces plasma membrane rupture in response to cell swelling caused by osmotic stress and ferroptosis downstream of lipid peroxidation (By similarity). Acts as a regulator of Toll-like receptor 4 (TLR4) signaling triggered by lipopolysaccharide (LPS) during systemic inflammation; directly binds LPS (PubMed:26677008). Involved in leukocyte migration during inflammation by promoting transendothelial migration of macrophages via homotypic binding (By similarity). Promotes the migration of monocytes across the brain endothelium to central nervous system inflammatory lesions (PubMed:22162058). Also acts as a homophilic transmembrane adhesion molecule involved in various processes such as axonal growth, cell chemotaxis and angiogenesis (PubMed:33028854, PubMed:8780658, PubMed:9261151). Promotes cell adhesion by mediating homophilic interactions via its extracellular N-terminal adhesion motif (N-NAM) (PubMed:33028854, PubMed:8780658, PubMed:9261151). Involved in the progression of the inflammatory stress by promoting cell-to-cell interactions between immune cells and endothelial cells (PubMed:22162058, PubMed:26677008, PubMed:32147432). Plays a role in nerve regeneration by promoting maturation of Schwann cells (PubMed:8780658, PubMed:9261151). Acts as a regulator of angiogenesis (PubMed:33028854). Promotes the formation of new vessels by mediating the interaction between capillary pericyte cells and endothelial cells (By similarity). Promotes osteoclasts development by enhancing the survival of prefusion osteoclasts (By similarity). Also involved in striated muscle growth and differentiation (By similarity).
Cellular Location	[Ninjurin-1]: Cell membrane; Multi-pass membrane protein. Synaptic cell membrane {ECO:0000250|UniProtKB:O70131}; Multi-pass membrane protein
Tissue Location	Widely expressed in both adult and embryonic tissues, primarily those of epithelial origin

Background

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Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.