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Nova1 Rabbit pAb

Catalog # AP99750

Product Information

Application	WB, IHC-P, IHC-F, IF
Primary Accession	P51513
Other Accession	P51513
Reactivity	Rat, Human, Mouse
Predicted	Chicken
Host	Rabbit
Clonality	Polyclonal
Calculated MW	51727
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human Nova1
Epitope Specificity	411-510/510
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Contains 3 KH domains.
SUBUNIT	Interacts with PTBP2; the interaction is direct (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	Nova-1 and Nova-2 are members of a superfamily of protein regulators of RNA metabolism in neurons. Both are nuclear RNA binding proteins with K homology motifs, conserved protein sequences which bind to RNA (1,2). Nova proteins, normally sequestered in the central nervous system, are expressed by systemic tumors in patients with the autoimmune disorder paraneoplastic opsoclonus-myoclonus ataxia (POMA) (3,4). Nova-1 is expressed in the hindbrain and ventral spinal cord and Nova-2 is expressed in the neocortex and hippocampus (4). Nova-1 is necessary for regulating neuron-specific alternative splicing of the glycine receptor Alpha2 pre-mRNA (5).

Additional Information

Gene ID	4857
Other Names	Nova-1; 9430099M15Rik; G630039L02; NOVA1_MACFA; NOVA1; Neuro-oncological ventral antigen 1; Ventral neuron-specific protein 1; NOVA1_HUMAN; Onconeural ventral antigen 1; Paraneoplastic Ri antigen; NOVA1_MOUSE; NOVA1_RAT; NOVA alternative splicing regulator 1
Dilution	WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500
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	NOVA1 (HGNC:7886)
Function	RNA-binding protein which regulates alternative splicing of pre-mRNAs in the brain and spinal cord in a sequence-specific manner (By similarity). Binds to 5'-YCAY-3' repeats, with a minimum of 2 to 3 repeats necessary for high-affinity binding. Mediates both exon inclusion and exclusion, depending upon the position of its binding site within the pre-mRNA (PubMed:10811881). Binding to 5'-YCAY-3' clusters results in a local and asymmetric action to regulate spliceosome assembly. Binding to an exonic 5'-YCAY-3' cluster changes the protein complexes assembled on pre-mRNA, blocking U1 small nuclear ribonucleoprotein (snRNP) binding and inhibiting exon inclusion, whereas binding to an intronic 5'-YCAY-3' repeat enhances spliceosome assembly and favors exon inclusion (By similarity). Regulates the splicing of gamma-aminobutyric acid receptor subunit gamma-2 (GABRG2) and glycine receptor subunit alpha-2 (GLRA2) pre-mRNAs, among others (By similarity). Autoregulates its own splicing. Binds to its own exon 4 and directs its exclusion, thus leading to NOVA1 isoform 3 production (By similarity). May affect the splicing of many genes involved in vocal behavior (By similarity).
Cellular Location	Nucleus {ECO:0000250|UniProtKB:Q9JKN6}.
Tissue Location	Expressed in cerebellum, brain stem, hippocampus, and frontal cortex.

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