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NOVA1 Antibody (Center)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP20963a

Product Information

Application	WB, IHC-P, E
Primary Accession	P51513
Reactivity	Human, Rat, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB50876
Calculated MW	51727

Additional Information

Gene ID	4857
Other Names	RNA-binding protein Nova-1, Neuro-oncological ventral antigen 1, Onconeural ventral antigen 1, Paraneoplastic Ri antigen, Ventral neuron-specific protein 1, NOVA1
Target/Specificity	This NOVA1 antibody is generated from a rabbit immunized with a KLH conjugated synthetic peptide between 139-173 amino acids from the Central region of human NOVA1.
Dilution	WB~~1:1000 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	NOVA1 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	NOVA1 (HGNC:7886)
Function	Functions to regulate alternative splicing in neurons by binding pre-mRNA in a sequence-specific manner to activate exon inclusion or exclusion. It binds specifically to the sequences 5'-YCAY- 3' and regulates splicing in only a subset of regulated exons (PubMed:10811881). Binding to an exonic 5'-YCAY-3'

cluster changes the protein complexes assembled on pre-mRNA, blocking U1 snRNP binding and exon inclusion, whereas binding to an intronic 5'-YCAY-3' cluster enhances spliceosome assembly and exon inclusion. Binding to 5'-YCAY-3' clusters results in a local and asymmetric action to regulate spliceosome assembly and alternative splicing in neurons. Binding to an exonic 5'-YCAY-3' cluster changed the protein complexes assembled on pre-mRNA, blocking U1 snRNP (small nuclear ribonucleoprotein) binding and exon inclusion, whereas binding to an intronic 5'-YCAY-3' cluster enhanced spliceosome assembly and exon inclusion. With NOVA1, they perform unique biological functions in different brain areas and cell types. Autoregulates its own expression by acting as a splicing repressor. Acts to activate the inclusion of exon E3A in the glycine receptor alpha-2 chain and of exon E9 in gamma-aminobutyric-acid receptor gamma-2 subunit via a distal downstream UCAU-rich intronic splicing enhancer. Acts to regulate a novel glycine receptor alpha-2 chain splice variant (alpha-2N) in developing spinal cord (By similarity).

Cellular Location Nucleus {ECO:0000250|UniProtKB:Q9JKN6}.

Tissue Location Expressed in cerebellum, brain stem, hippocampus, and frontal cortex.

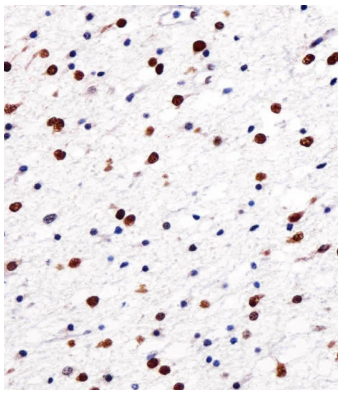
Background

May regulate RNA splicing or metabolism in a specific subset of developing neurons.

References

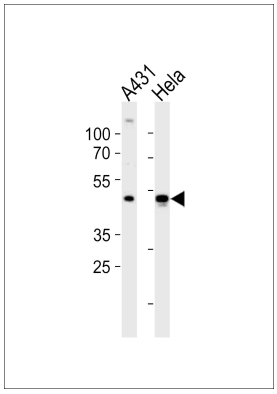
Buckanovich R.J.,et al.Neuron 11:657-672(1993).
Ota T.,et al.Nat. Genet. 36:40-45(2004).
Venter J.C.,et al.Science 291:1304-1351(2001).
Mural R.J.,et al.Submitted (SEP-2005) to the EMBL/GenBank/DDBJ databases.
Dmitrenko V.V.,et al.Submitted (APR-1996) to the EMBL/GenBank/DDBJ databases.

Images



Immunohistochemical analysis of paraffin-embedded H. astroglioma section using NOVA1 Antibody (Center)(Cat#AP20963a). AP20963a was diluted at 1:25 dilution. A undiluted biotinylated goat polyvalent antibody was used as the secondary, followed by DAB staining.

Western blot analysis of lysates from A431, Hela cell line (from left to right), using NOVA1 Antibody (Center)(Cat. #AP20963a). AP20963a was diluted at 1:1000 at each lane. A goat anti-rabbit IgG H&L(HRP) at 1:10000 dilution was used as the secondary antibody. Lysates at 20ug per lane.



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