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Anti-ADAR2 Antibody

Catalog # AP50962

Product Information

Application	WB, IHC, IF/IC
Primary Accession	P78563
Reactivity	Human, Mouse, Rat, Zebrafish, Chicken
Host	Rabbit
Clonality	Polyclonal
Calculated MW	80763

Additional Information

Gene ID	104
Other Names	ADAR2; DRADA2; RED1; Double-stranded RNA-specific editase 1; RNA-editing deaminase 1; RNA-editing enzyme 1; dsRNA adenosine deaminase
Target/Specificity	KLH-conjugated synthetic peptide encompassing a sequence within the center region of human ADAR2. The exact sequence is proprietary.
Dilution	WB~~WB (1/500 - 1/1000) IHC~~1:100~500 IF/IC~~N/A
Format	Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.01% sodium azide.
Storage	Store at -20 °C.Stable for 12 months from date of receipt

Protein Information

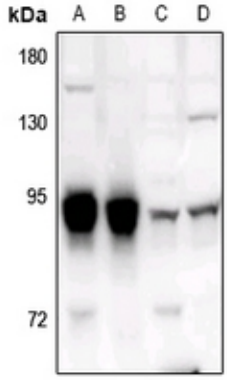
Name	ADARB1 (HGNC:226)
Function	Catalyzes the hydrolytic deamination of adenosine to inosine in double-stranded RNA (dsRNA) referred to as A-to-I RNA editing. This may affect gene expression and function in a number of ways that include mRNA translation by changing codons and hence the amino acid sequence of proteins; pre-mRNA splicing by altering splice site recognition sequences; RNA stability by changing sequences involved in nuclease recognition; genetic stability in the case of RNA virus genomes by changing sequences during viral RNA replication; and RNA structure-dependent activities such as microRNA production or targeting or protein-RNA interactions. Can edit both viral and cellular RNAs and can edit RNAs at multiple sites (hyper-editing) or at specific sites (site-specific editing). Its cellular RNA substrates include: bladder cancer-associated protein (BLCAP), neurotransmitter receptors for glutamate (GRIA2 and GRIK2) and serotonin (HTR2C), GABA receptor (GABRA3) and potassium voltage-gated channel (KCNA1). Site-specific RNA editing of transcripts encoding these proteins results in amino acid substitutions which

	consequently alter their functional activities. Edits GRIA2 at both the Q/R and R/G sites efficiently but converts the adenosine in hotspot1 much less efficiently. Can exert a proviral effect towards human immunodeficiency virus type 1 (HIV-1) and enhances its replication via both an editing-dependent and editing-independent mechanism. The former involves editing of adenosines in the 5'UTR while the latter occurs via suppression of EIF2AK2/PKR activation and function. Can inhibit cell proliferation and migration and can stimulate exocytosis.
Cellular Location	Nucleus. Nucleus, nucleolus. Note=Shuttles between nucleoli and the nucleoplasm. [Isoform 2]: Nucleus. Nucleus, nucleolus
Tissue Location	Highly expressed in brain and heart and at lower levels in placenta. Fair expression in lung, liver and kidney. Detected in brain, heart, kidney, lung and liver (at protein level)

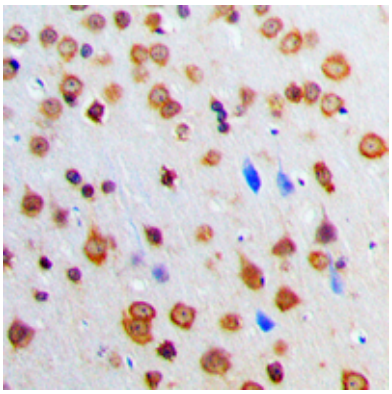
References

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Villard L.,et al.Somat. Cell Mol. Genet. 23:135-145(1997).
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Images

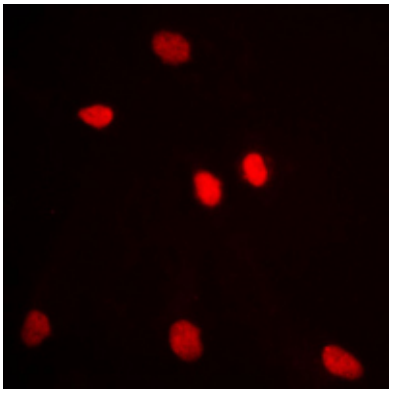


Western blot analysis of ADAR2 expression in LO2 (A), HepG2 (B), CT26 (C), C6 (D) whole cell lysates. (Predicted band size: 80 kD; Observed band size: 90 kD)



Immunohistochemical analysis of ADAR2 staining in human brain formalin fixed paraffin embedded tissue section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0). The section was then incubated with the antibody at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

Immunofluorescent analysis of ADAR2 staining in MCF7 cells. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were



probed with the primary antibody in 3% BSA-PBS and incubated overnight at 4 °C in a humidified chamber. Cells were washed with PBST and incubated with a DyLight 594-conjugated secondary antibody (red) in PBS at room temperature in the dark.

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