

Anti-ADAR1 antibody



Description	Rabbit polyclonal to ADAR1.
Model	STJ91483
Host	Rabbit
Reactivity	Human, Mouse, Rat
Applications	ELISA, IHC
Immunogen	Synthesized peptide derived from human ADAR1
Immunogen Region	1140-1220 aa, C-terminal
Gene ID	103
Gene Symbol	ADAR
Dilution range	IHC 1:100-1:300ELISA 1:20000
Specificity	ADAR1 Polyclonal Antibody detects endogenous levels of ADAR1 protein.
Tissue Specificity	Ubiquitously expressed, highest levels were found in brain and lung. Isoform 5 is expressed at higher levels in astrocytomas as compared to normal brain tissue and expression increases strikingly with the severity of the tumor, being higher in the most aggressive tumors.
Purification	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.
Note	For Research Use Only (RUO).
Protein Name	Double-stranded RNA-specific adenosine deaminase DRADA 136 kDa double-stranded RNA-binding protein p136 Interferon-inducible protein 4 IFI-4 K88DSRBP

Molecular Weight	136/25 kDa
Clonality	Polyclonal
Conjugation	Unconjugated
Isotype	IgG
Formulation	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
Concentration	1 mg/ml
Storage Instruction	Store at -20°C, and avoid repeat freeze-thaw cycles.
Database Links	HGNC:225OMIM:127400
Alternative Names	Double-stranded RNA-specific adenosine deaminase DRADA 136 kDa double-stranded RNA-binding protein p136 Interferon-inducible protein 4 IFI-4 K88DSRBP
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 serotonin (HTR2C) and GABA receptor (GABRA3). Site-specific RNA editing of transcripts encoding these proteins results in amino acid substitutions which consequently alters their functional activities. Exhibits low-level editing at the GRIA2 Q/R site, but edits efficiently at the R/G site and HOTSPOT1. Its viral RNA substrates include: hepatitis C virus (HCV), vesicular stomatitis virus (VSV), measles virus (MV), hepatitis delta virus (HDV), and human immunodeficiency virus type 1 (HIV-1). Exhibits either a proviral (HDV, MV, VSV and HIV-1) or an antiviral effect (HCV) and this can be editing-dependent (HDV and HCV), editing-independent (VSV and MV) or both (HIV-1). Impairs HCV replication via RNA editing at multiple sites. Enhances the replication of MV, VSV and HIV-1 through an editing-independent mechanism via suppression of EIF2AK2/PKR activation and function. Stimulates both the release and infectivity of HIV-1 viral particles by an editing-dependent mechanism where it associates with viral RNAs and edits adenosines in the 5'UTR and the Rev and Tat coding sequence. Can enhance viral replication of HDV via A-to-I editing at a site designated as amber/W, thereby changing an UAG amber stop codon to an UGG tryptophan (W) codon that permits synthesis of the large delta antigen (L-HDAg) which has a key role in the assembly of viral particles. However, high levels of ADAR1 inhibit HDV replication.
Cellular Localization	Isoform 1: Cytoplasm. Nucleus. Shuttles between the cytoplasm and nucleus.. Isoform 5: Cytoplasm. Nucleus. Nucleus, nucleolus. Predominantly nuclear but can shuttle between nucleus and cytoplasm. TNPO1 can mediate its nuclear import whereas XPO1 can mediate its nuclear export.

**Post-translational
Modifications**

Sumoylation reduces RNA-editing activity.

St John's Laboratory Ltd

F +44 (0)207 681 2580
T +44 (0)208 223 3081

W <http://www.stjohnslabs.com/>
E info@stjohnslabs.com