ADAR1 Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

Product Name	ADAR1, Polyclonal Antibody
Full Product Name	ADAR1 Conjugated Antibody
Product Gene Name	anti-ADAR1 antibody
Product Synonym Names	136 kDa double-stranded RNA binding protein; ADAR1; DRADA; DSH; DSRAD
Clonality	Polyclonal
Host	Rabbit
Species Reactivity	Human, Mouse
Form/Format	0.01M Sodium Phosphate, 0.25M NaCl, pH 7.6, 5mg/ml Bovine Serum Albumin, 0.02% Sodium Azide
Specificity	The antibody detects endogenous levels of total ADAR1 protein.
Preparation and Storage	Store at 4 degree C for 6 months.
Molecular Weight	136,066 Da
Chromosome Location	Chromosome: 1; NC_000001.10 (154554533..154600456, complement). Location: 1q21.3
OMIM	127400
3D Structure	ModBase 3D Structure for P55265
Immunogen	Synthesized peptide derived from C-terminal of human ADAR1.
Conjugation	Biotin AF350 AF405 AF488 AF555 AF594 AF647 AF680 AF750
Excitation Emission	AF350: 346nm/442nm
Applications Tested/Suitable for anti-ADAR1 antibody	Most Applications
Application Notes for anti-ADAR1 antibody	Suggested Dilution: AF350 conjugated: most applications: 1:50-1:250 AF405 conjugated: most applications: 1:50-1:250 AF488 conjugated: most applications: 1:50-1:250 AF555 conjugated: most applications: 1:50-1:250 AF594 conjugated: most applications: 1:50-1:250 AF647 conjugated: most applications: 1:50-1:250 AF680 conjugated: most applications: 1:50-1:250 AF750 conjugated: most applications: 1:50-1:250 Biotin conjugated: working with enzyme-conjugated streptavidin, most applications: 1:50-1:1000

Related Product Information for anti-ADAR1 antibody	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 UIG 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.
Other Notes	Small volumes of anti-ADAR1 antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for ADAR1 purchase	MBS9444717 is an antibody targeting ADAR1. Also known as ADAR1 Conjugated Antibody. Reactive in Human, Mouse. Host: Rabbit.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for ADAR1. It may not necessarily be applicable to this product.

NCBI GI #	70167113
NCBI GeneID	103
NCBI Accession #	NP_001020278.1
UniProt Primary Accession #	P55265
UniProt Secondary Accession #	O15223; O43859; O43860; Q9BYM3; Q9BYM4; B1AQQ9; B1AQR0; D3DV76
UniProt Related Accession #	P55265
GenBank Nucleotide #	NM_001025107.2
NCBI Official Full Name	double-stranded RNA-specific adenosine deaminase isoform d
NCBI Official Synonym Full Names	adenosine deaminase, RNA-specific
NCBI Official Symbol	ADAR
NCBI Official Synonym Symbols	DSH; AGS6; G1P1; IFI4; P136; ADAR1; DRADA; DSRAD; IFI-4; K88DSRBP
UniProt Protein Name	Double-stranded RNA-specific adenosine deaminase
UniProt Synonym Protein Names	136 kDa double-stranded RNA-binding protein; p136; Interferon-inducible protein 4; IFI-4; K88DSRBP
UniProt Gene Name	ADAR
UniProt Synonym Gene Names	ADAR1; DSRAD; G1P1; IFI4; DRADA; p136; IFI-4
UniProt Entry Name	DSRAD_HUMAN
NCBI Protein Information	double-stranded RNA-specific adenosine deaminase; dsRNA adenosine deaminase; interferon-induced protein 4; interferon-inducible protein 4; adenosine deaminase acting on RNA 1-A; 136 kDa double-stranded RNA-binding protein

NCBI Summary for ADAR1	This gene encodes the enzyme responsible for RNA editing by site-specific deamination of adenosines. This enzyme destabilizes double-stranded RNA through conversion of adenosine to inosine. Mutations in this gene have been associated with dyschromatosis symmetrica hereditaria. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Jul 2010]
UniProt Comments for ADAR1	ADAR: Converts multiple adenosines to inosines and creates I/U mismatched base pairs in double-helical RNA substrates without apparent sequence specificity. Has been found to modify more frequently adenosines in AU-rich regions, probably due to the relative ease of melting A/U base pairs as compared to G/C pairs. Functions to modify viral RNA genomes and may be responsible for hypermutation of certain negative-stranded viruses. Edits the messenger RNAs for glutamate receptor (GLUR) subunits by site- selective adenosine deamination. Produces low-level editing at the GLUR-B Q/R site, but edits efficiently at the R/G site and HOTSPOT1. Binds to short interfering RNAs (siRNA) without editing them and suppresses siRNA-mediated RNA interference. Binds to ILF3/NF90 and up-regulates ILF3-mediated gene expression. Isoform 1 is induced by interferon alpha. Isoform 5 is constitutively expressed. Homodimer. Isoform 1 interacts with ILF2/NF45 and ILF3/NF90. 5 isoforms of the human protein are produced by alternative promoter. Protein type: RNA-binding; RNA processing; Nucleolus; Hydrolase; EC 3.5.4.37 Chromosomal Location of Human Ortholog: 1q21.3 Cellular Component: nucleoplasm; membrane; cytoplasm; nucleolus; nucleus Molecular Function: double-stranded RNA adenosine deaminase activity; protein binding; DNA binding; metal ion binding Biological Process: positive regulation of viral genome replication; base conversion or substitution editing; in utero embryonic development; response to virus; cytokine and chemokine mediated signaling pathway; miRNA-mediated gene silencing, miRNA loading onto RISC; somatic diversification of immune receptors via somatic mutation; adenosine to inosine editing; osteoblast differentiation; negative regulation of viral genome replication; protein import into nucleus; pre-microRNA processing; mRNA modification; innate immune response; erythrocyte differentiation; gene expression; hemopoietic progenitor cell differentiation; protein export from nucleus; mRNA processing; defense response to virus; negative regulation of apoptosis Disease: Dyschromatosis Symmetrica Hereditaria; Aicardi-goutieres Syndrome 6
Research Articles on ADAR1	**1.** we have found 2 novel and 1 recurrent mutation, which will expand the database of ADAR1 gene mutations in dyschromatosis symmetrica hereditaria (DSH) and may provide new insight into the pathogenesis of DSH.
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