ADAR2 Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

Product Name	ADAR2, Polyclonal Antibody
Full Product Name	ADAR2 Antibody
Product Gene Name	anti-ADAR2 antibody
Product Synonym Gene Name	ADARB1
Product Synonym Names	Double-stranded RNA-specific editase 1; RNA-editing deaminase 1; RNA-editing enzyme 1; dsRNA adenosine deaminase; ADARB1; ADAR2; DRADA2; RED1
Clonality	Polyclonal
Host	Rabbit
Species Reactivity	Human, Mouse, Rat
Purity/Purification	Purified Rabbit Polyclonal Antibody (Pab)
Preparation and Storage	Maintain refrigerated at 2-8 degree C for up to 2 weeks. For long term storage store at -20 degree C in small aliquots to prevent freeze-thaw cycles.
Molecular Weight	80,763 Da
Chromosome Location	Chromosome: 21; NC_000021.8 (46494493..46646478). Location: 21q22.3
OMIM	601218
3D Structure	ModBase 3D Structure for P78563
Applications Tested/Suitable for anti-ADAR2 antibody	Western Blot (WB), Immunocytochemistry (ICC), Immunohistochemistry-Paraffin (IHC-P), ELISA (EIA)
Related Product Information for anti-ADAR2 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 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.
Product References and Citations for anti-ADAR2 antibody	Gerber A., et al.RNA 3:453-463 (1997).Mittaz L., et al.Genomics 41:210-217 (1997).Lai F., et al.Mol. Cell. Biol. 17:2413-2424 (1997).Villard L., et al.Somat. Cell Mol. Genet. 23:135-145 (1997).Slavov D., et al.Gene 299:83-94 (2002).
Other Notes	Small volumes of anti-ADAR2 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 ADAR2 purchase	MBS9232453 is an antibody targeting ADAR2. Also known as ADAR2 Antibody. Reactive in Human, Mouse, Rat. Host: Rabbit.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for ADAR2. It may not necessarily be applicable to this product.

NCBI GI #	4501919
NCBI GeneID	104
NCBI Accession #	NP_001103.1
UniProt Primary Accession #	P78563
UniProt Secondary Accession #	O00395; O00465; O00691; O00692; P78555; Q4AE79; Q8NFD1; A6NFK8; A6NJ84; C3TTQ1
UniProt Related Accession #	P78563
GenBank Nucleotide #	NM_001112.3
NCBI Official Full Name	double-stranded RNA-specific editase 1 isoform 1
NCBI Official Synonym Full Names	adenosine deaminase, RNA-specific, B1
NCBI Official Symbol	ADARB1
NCBI Official Synonym Symbols	RED1; ADAR2; DRABA2; DRADA2
UniProt Protein Name	Double-stranded RNA-specific editase 1
UniProt Synonym Protein Names	RNA-editing deaminase 1; RNA-editing enzyme 1; dsRNA adenosine deaminase
UniProt Gene Name	ADARB1
UniProt Synonym Gene Names	ADAR2; DRADA2; RED1
UniProt Entry Name	RED1_HUMAN
NCBI Protein Information	double-stranded RNA-specific editase 1; RNA editase; RED1 homolog; RNA-editing enzyme 1; RNA editing deaminase 1; RNA-editing deaminase 1; dsRNA adenosine deaminase DRADA2; adenosine deaminase, RNA-specific, B1 (RED1 homolog rat); adenosine deaminase, RNA
NCBI Summary for ADAR2	This gene encodes the enzyme responsible for pre-mRNA editing of the glutamate receptor subunit B by site-specific deamination of adenosines. Studies in rat found that this enzyme acted on its own pre-mRNA molecules to convert an AA dinucleotide to an AI dinucleotide which resulted in a new splice site. Alternative splicing of this gene results in several transcript variants, some of which have been characterized by the presence or absence of an ALU cassette insert and a short or long C-terminal region. [provided by RefSeq, Jul 2008]
UniProt Comments for ADAR2	RED1: Editing of the messenger RNAs for glutamate receptor (GluR) subunits by site-selective adenosine deamination. Edits both the GluR-B Q/R and R/G sites efficiently but converts the adenosine in hotspot1 much less efficiently. 5 isoforms of the human protein are produced by alternative splicing. Protein type: RNA-binding; Nucleolus; Hydrolase; EC 3.5.4.37 Chromosomal Location of Human Ortholog: 21q22.3 Cellular Component: nucleoplasm; cytoplasm; nucleolus; nucleus Molecular Function: adenosine deaminase activity; mRNA binding; double-stranded RNA adenosine deaminase activity; protein binding; RNA binding; metal ion binding; double-stranded RNA binding Biological Process: RNA processing; negative regulation of cell proliferation; base conversion or substitution editing; positive regulation of viral genome replication; regulation of cell cycle; mRNA modification; innate immune response; gene expression; mRNA processing; defense response to virus; adenosine to inosine editing; negative regulation of cell migration
Research Articles on ADAR2	**1.** ADAR2 activity does not consistently change due to the overexpression or knockdown of TDP-43 or the expression of abnormal TDP-43 in amyotrophic lateral sclerosis (ALS) motor neurons.

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