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APOBEC3A Antibody (N-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP20219a

Product Information

Application	WB, E
Primary Accession	P31941
Other Accession	NP_663745.1
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB42401
Calculated MW	23012
Antigen Region	20-49

Additional Information

Gene ID	100913187;200315
Other Names	DNA dC->dU-editing enzyme APOBEC-3A, A3A, 354-, Phorbolin-1, APOBEC3A
Target/Specificity	This APOBEC3A antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 20-49 amino acids from the N-terminal region of human APOBEC3A.
Dilution	WB~~1:1000 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	APOBEC3A Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	APOBEC3A
Function	DNA deaminase (cytidine deaminase) with restriction activity against viruses, foreign DNA and mobility of retrotransposons. Exhibits antiviral activity against adeno-associated virus (AAV) and human T- cell leukemia virus type 1 (HTLV-1) and may inhibit the mobility of LTR and non-LTR

	retrotransposons. Selectively targets single-stranded DNA and can deaminate both methylcytosine and cytosine in foreign DNA. Can induce somatic hypermutation in the nuclear and mitochondrial DNA. May also play a role in the epigenetic regulation of gene expression through the process of active DNA demethylation.
Cellular Location	Nucleus. Cytoplasm.
Tissue Location	Expressed in peripheral leukocytes with higher expression in CD14-positive phagocytic cells. Highly expressed in keratinocytes and in periphery blood monocytes. Also detected in non- lymphoid tissues including lung and adipose tissues. Found at high levels in colorectal adenocarcinoma, Burkitt's lymphoma and chronic myelogenous leukemia.

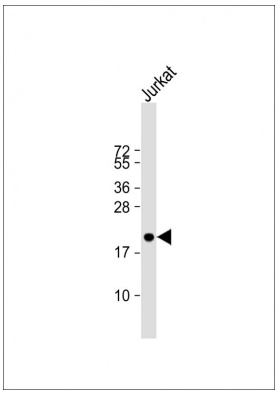
Background

This gene is a member of the cytidine deaminase gene family. It is one of seven related genes or pseudogenes found in a cluster, thought to result from gene duplication, on chromosome 22. Members of the cluster encode proteins that are structurally and functionally related to the C to U RNA-editing cytidine deaminase APOBEC1. The protein encoded by this gene lacks the zinc binding activity of other family members. The protein plays a role in immunity, by restricting transmission of foreign DNA such as viruses. One mechanism of foreign DNA restriction is deamination of foreign double-stranded DNA cytidines to uridines, which leads to DNA degradation. However, other mechanisms are also thought to be involved, as anti-viral effect is not dependent on deaminase activity. One allele of this gene results from the deletion of approximately 29.5 kb of sequence between this gene, APOBEC3A, and the adjacent gene APOBEC3B. The breakpoints of the deletion are within the two genes, so the deletion allele is predicted to have the promoter and coding region of APOBEC3A, but the 3' UTR of APOBEC3B.

References

Thielen, B.K., et al. J. Biol. Chem. 285(36):27753-27766(2010)
Berger, A., et al. J. Biol. Chem. 285(16):12248-12254(2010)
Stenglein, M.D., et al. Nat. Struct. Mol. Biol. 17(2):222-229(2010)
Abe, H., et al. Hepatol. Res. 39(12):1159-1168(2009)
Prochnow, C., et al. Sci. China, C, Life Sci. 52(10):893-902(2009)

Images



Anti-APOBEC3A Antibody (N-term) at 1:1000 dilution + Jurkat whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 23 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

Citations

- Comprehensive Analyses Identify APOBEC3A as a Genomic Instability-Associated Immune Prognostic Biomarker in Ovarian Cancer

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.