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APOBEC3C Rabbit pAb

Catalog # AP97756

Product Information

Application	IHC-P, IHC-F, IF
Primary Accession	Q9NRW3
Other Accession	Q9NRW3
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Calculated MW	22826
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human APOBEC3C
Epitope Specificity	121-190/190
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Belongs to the cytidine and deoxycytidylate deaminase family.
SUBUNIT	Homodimer. Interacts with human foamy virus protein Bet; this interaction does not induce APOBEC3C degradation, but prevents dimerization and incorporation into virion of the latter. Interacts with TRIB3 and EIF2C2/AGO2.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	APOBEC proteins inhibit retroviruses by deaminating cytosine residues of viral RNA and DNA. The seven APOBEC3 genes or pseudogenes are found in a cluster thought to result from gene duplication on chromosome 22. Like APOBEC3G, APOBEC3F deaminates deoxycytosine to deoxyuracil in the minus strand of HIV-1 DNA, resulting in G to A hypermutation in the plus strand of DNA. Thus, APOBEC3G and APOBEC3F provide a mechanism for innate immunity to retroviruses, and are also likely contribute to sequence variation observed in many viruses. Viral infectivity factor (Vif) imparts APOBEC3G and APOBEC3F resistance to HIV through impaired translation of their mRNA and accelerated posttranslational degradation of the APOBEC3 proteins by the 26S proteasome. Interestingly, HIV-1 Vif cannot form a complex with APOBEC3G or APOBEC3F of mouse origin as it does with the human protein, and thus mouse APOBEC3G and APOBEC3F function as a potent inhibitors of wildtype HIV-1 replication, where human APOBEC3G and APOBEC3F are only able to inhibit Vif-deficient HIV-1 replication. This implies that induction of APOBEC3G and APOBEC3F activity or a method of blocking their interaction with Vif may provide a method for therapeutic intervention.

Additional Information

Gene ID	27350
Other Names	A3C; APOBEC1L; ARDC2; ARDC4; ARP5; PBI; bK150C2.3; ABC3C_HUMAN; APOBEC3C; APOBEC1-like; Phorbolin I; 3.5.4.38; apolipoprotein B mRNA

	editing enzyme catalytic subunit 3C; apolipoprotein B mRNA editing enzyme, catalytic polypeptide-like 3C
Dilution	IHC-P=1:100-500,IHC-F=1:100-500,ICC/IF=1:100-500,IF=1:100-500
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	APOBEC3C
Synonyms	APOBEC1L, PBI
Function	DNA deaminase (cytidine deaminase) which acts as an inhibitor of retrovirus replication and retrotransposon mobility via deaminase- dependent and -independent mechanisms. After the penetration of retroviral nucleocapsids into target cells of infection and the initiation of reverse transcription, it can induce the conversion of cytosine to uracil in the minus-sense single-strand viral DNA, leading to G-to-A hypermutations in the subsequent plus-strand viral DNA. The resultant detrimental levels of mutations in the proviral genome, along with a deamination-independent mechanism that works prior to the proviral integration, together exert efficient antiretroviral effects in infected target cells. Selectively targets single-stranded DNA and does not deaminate double-stranded DNA or single- or double-stranded RNA. Exhibits antiviral activity against simian immunodeficiency virus (SIV), hepatitis B virus (HBV), herpes simplex virus 1 (HHV-1) and Epstein-Barr virus (EBV) and may inhibit the mobility of LTR and non- LTR retrotransposons. 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 spleen, testes, peripherical blood lymphocytes, heart, thymus, prostate and ovary

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