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APOBEC3B Antibody
Catalog # ASC11775

Specification

APOBEC3B Antibody - Product Information

Application	**WB, IHC, IF**
Primary Accession	Q9UH17
Other Accession	NP_004891, 393715117
Reactivity	**Human, Mouse, Rat**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**IgG**
Calculated MW	**Predicted: 42 kDa** **Observed: 48 kDa KDa**
Application Notes	**APOBEC3B antibody can be used for detection of APOBEC3B by Western blot at 1 - 2 µg/ml. Antibody can also be used for Immunohistochemistry at 5 µg/mL. For Immunoflorescence start at 20 µg/mL.**

APOBEC3B Antibody - Additional Information

Gene ID **9582**

Target/Specificity
APOBEC3B; APOBEC3B antibody is human, mouse and rat reactive . At least three isoforms of APOBEC3B are known to exist; this antibody will detect all three. APOBEC3B antibody may cross-react with APOBEC3D.

Reconstitution & Storage
APOBEC3B antibody can be stored at 4℃ for three months and -20℃, stable for up to one year.

Precautions
APOBEC3B Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

APOBEC3B Antibody - Protein Information

Name APOBEC3B

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) and human T-cell leukemia virus type 1 (HTLV-1) and may inhibit the mobility of LTR and non-LTR retrotransposons.

Cellular Location
Nucleus

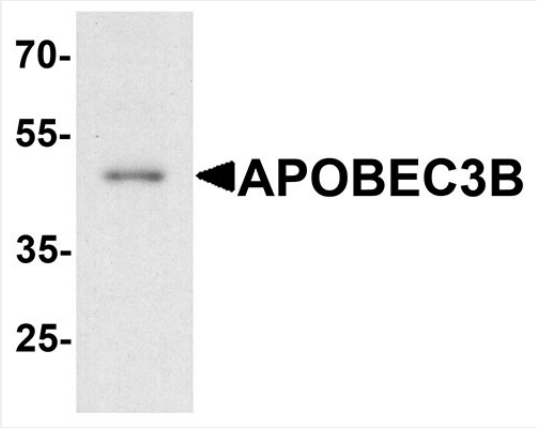
Tissue Location
Expressed at high and moderate levels in peripheral blood leukocytes, spleen, testes, heart, thymus, prostate and ovary Also expressed at low levels in several other tissues

APOBEC3B Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

APOBEC3B Antibody - Images



Western blot analysis of APOBEC3B in rat small intestine tissue lysate with APOBEC3B antibody at 1 µg/ml.

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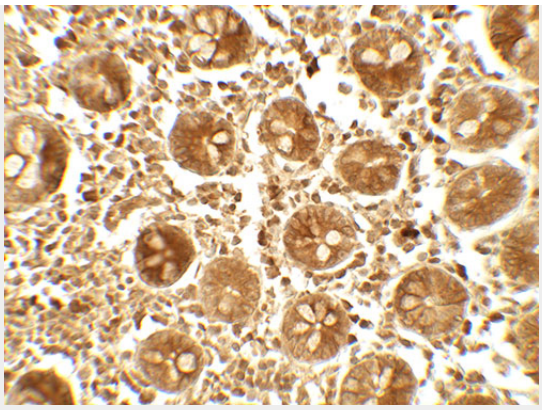
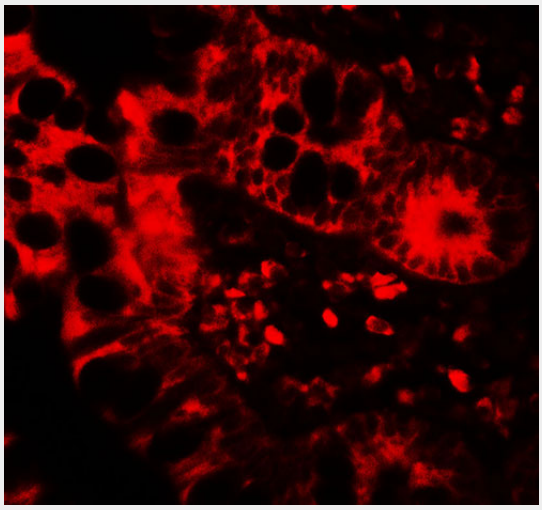


Immunohistochemistry of APOBEC3B in human small intestine tissue with APOBEC3B antibody at 5 µg/mL.



Immunofluorescence of APOBEC3B in human small intestine tissue with APOBEC3B antibody at 20 µg/mL.

APOBEC3B Antibody - Background

The Apolipoprotein B mRNA-editing, enzyme-catalytic, polypeptide-like (APOBEC) 3 is a multi-isoform member of the cytosine deaminase family of enzymes that act on monomeric nucleoside and nucleotide substrates (1). Similar to TRIM5? which targets incoming retroviral capsids, APOBEC3 plays a major role in cellular defense against retroviral infection (2,3). APOBEC3B has also been shown to be upregulated in several cancers; it is thought that APOBEC3B-catalyzed genomic uracil lesions are responsible for a large proportion of mutations in multiple distinct cancers (4).

APOBEC3B Antibody - References

Jarmuz A, Chester A, Bayliss J, et al. An anthropoid-specific locus of Orphan C to U RNA-editing enzymes on chromosome 22. Genomics 2002; 79:285-96.
Stremlau M, Owens CM, Perron MJ, et al. The cytoplasmic body component TRIM5? restricts HIV-1 infection in Old World monkeys. Nature 2004; 427:848-53.
Bieniasz PD. Intrinsic immunity: a front-line defense against viral attack. Nat Immunol. 2004; 5:1109-15.
Burns MB, Temiz NA, and Harris RS. Evidence for APOBEC3B mutagenesis in multiple human cancers. Nat. Genet. 2013; 45:977-83.