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APOBEC3A Blocking Peptide (N-term)

Synthetic peptide
Catalog # BP20219a

Specification

APOBEC3A Blocking Peptide (N-term) - Product Information

Primary Accession	P31941
Other Accession	NP_663745.1

APOBEC3A Blocking Peptide (N-term) - Additional Information

Gene ID 100913187;200315

Other Names
DNA dC->dU-editing enzyme APOBEC-3A, A3A, 354-, Phorbolin-1, APOBEC3A

Target/Specificity
The synthetic peptide sequence is selected from aa 35-49 of HUMAN APOBEC3A

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

APOBEC3A Blocking Peptide (N-term) - 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-

APOBEC3A Blocking Peptide (N-term) - 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.

APOBEC3A Blocking Peptide (N-term) - 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)

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.

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)

APOBEC3A Blocking Peptide (N-term) - Protocols

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

- Blocking Peptides