

Goat Anti-APOBEC3G Antibody
Peptide-affinity purified goat antibody
Catalog # AF1080a**Specification**

Goat Anti-APOBEC3G Antibody - Product Information

Application	WB, E
Primary Accession	O9HC16
Other Accession	NP_068594 , 60489
Reactivity	Human
Host	Goat
Clonality	Polyclonal
Concentration	100ug/200ul
Isotype	IgG
Calculated MW	46408

Goat Anti-APOBEC3G Antibody - Additional Information**Gene ID** 60489**Other Names**

DNA dC->dU-editing enzyme APOBEC-3G, 3.5.4.-, APOBEC-related cytidine deaminase, APOBEC-related protein, ARCD, APOBEC-related protein 9, ARP-9, CEM-15, CEM15, Deoxycytidine deaminase, A3G, APOBEC3G

Dilution

WB~~1:1000

E~~N/A

Format

0.5 mg IgG/ml in Tris saline (20mM Tris pH7.3, 150mM NaCl), 0.02% sodium azide, with 0.5% bovine serum albumin

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

Goat Anti-APOBEC3G Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Goat Anti-APOBEC3G Antibody - Protein Information**Name** APOBEC3G {ECO:0000303|PubMed:14557625, ECO:0000312|HGNC:HGNC:17357}**Function**

DNA deaminase (cytidine deaminase) which acts as an inhibitor of retrovirus replication and

retrotransposon mobility via deaminase- dependent and -independent mechanisms (PubMed:12808465, PubMed:16527742, PubMed:17121840, PubMed:18288108, PubMed:18849968, PubMed:19153609, PubMed:21123384, PubMed:22791714, PubMed:25542899). Exhibits potent antiviral activity against Vif-deficient HIV-1 (PubMed:12167863, PubMed:12859895, PubMed:14557625, PubMed:20219927, PubMed:21835787, PubMed:22807680, PubMed:22915799, PubMed:23097438, PubMed:23152537, PubMed:31397674). 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 (PubMed:12808465, PubMed:12808466, PubMed:12809610, PubMed:12970355, PubMed:14528300, PubMed:22807680). 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 (PubMed:12808465, PubMed:12808466, PubMed:12809610, PubMed:12970355, PubMed:14528300). Selectively targets single-stranded DNA and does not deaminate double-stranded DNA or single- or double-stranded RNA (PubMed:12808465, PubMed:12809610, PubMed:12970355, PubMed:14528300). Exhibits antiviral activity also against simian immunodeficiency viruses (SIVs), hepatitis B virus (HBV), equine infectious anemia virus (EIAV), xenotropic MuLV-related virus (XMRV) and simian foamy virus (SFV) (PubMed:15031497, PubMed:16378963, PubMed:18448976, PubMed:19458006, PubMed:20335265). May inhibit the mobility of LTR and non-LTR retrotransposons (PubMed:16527742).

Cellular Location

Cytoplasm. Nucleus Cytoplasm, P-body. Note=Mainly cytoplasmic (PubMed:16527742, PubMed:16699599, PubMed:21835787). Small amount are found in the nucleus (PubMed:18667511). During HIV-1 infection, virion-encapsidated in absence of HIV-1 Vif

(PubMed:12859895)

Tissue Location

Expressed in spleen, testes, ovary and peripheral blood leukocytes and CD4+ lymphocytes. Also expressed in non-permissive peripheral blood mononuclear cells, and several tumor cell lines; no expression detected in permissive lymphoid and non-lymphoid cell lines. Exists only in the LMM form in peripheral blood-derived resting CD4 T- cells and monocytes, both of which are refractory to HIV-1 infection. LMM is converted to a HMM complex when resting CD4 T-cells are activated or when monocytes are induced to differentiate into macrophages. This change correlates with increased susceptibility of these cells to HIV-1 infection.

Goat Anti-APOBEC3G 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 Cytometry](#)
- [Cell Culture](#)

Goat Anti-APOBEC3G Antibody - Images



EB7744 (0.5 µg/ml) staining of Daudi lysate (35 µg protein in RIPA buffer). Primary incubation was 1 hour. Detected by chemiluminescence.

Goat Anti-APOBEC3G Antibody - 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. It is thought that the proteins may be RNA editing enzymes and have roles in growth or cell cycle control. The protein encoded by this gene has been found to be a specific inhibitor of human immunodeficiency virus-1 (HIV-1) infectivity.

Goat Anti-APOBEC3G Antibody - References

A critical function of toll-like receptor-3 in the induction of anti-human immunodeficiency virus activities in macrophages. Zhou Y, et al. Immunology, 2010 Sep. PMID 20636339.

Identification of a critical T(Q/D/E)x5ADx2(I/L) motif from primate lentivirus Vif proteins that regulate APOBEC3G and APOBEC3F neutralizing activity. Dang Y, et al. J Virol, 2010 Sep. PMID 20592083.

Massive APOBEC3 editing of hepatitis B viral DNA in cirrhosis. Vartanian JP, et al. PLoS Pathog, 2010 May 27. PMID 20523896.

APOBEC3G contributes to HIV-1 variation through sublethal mutagenesis. Sadler HA, et al. J Virol, 2010 Jul. PMID 20463080.

APOBEC3G generates nonsense mutations in human T-cell leukemia virus type 1 proviral genomes in vivo. Fan J, et al. J Virol, 2010 Jul. PMID 20463074.