

APOBEC3G / ARP9 Antibody (internal region)
Peptide-affinity purified goat antibody
Catalog # AF2436a**Specification**

APOBEC3G / ARP9 Antibody (internal region) - Product Information

Application	IHC, E
Primary Accession	O9HC16
Other Accession	NP_068594.1 , 60489
Reactivity	Human
Host	Goat
Clonality	Polyclonal
Concentration	0.5 mg/ml
Isotype	IgG
Calculated MW	46408

APOBEC3G / ARP9 Antibody (internal region) - 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

IHC~~1:100~500

E~~N/A

Format

0.5 mg/ml in Tris saline, 0.02% sodium azide, pH7.3 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

APOBEC3G / ARP9 Antibody (internal region) is for research use only and not for use in diagnostic or therapeutic procedures.

APOBEC3G / ARP9 Antibody (internal region) - 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:<a

[12808465](http://www.uniprot.org/citations/12808465) PubMed: [16527742](http://www.uniprot.org/citations/16527742) PubMed: [17121840](http://www.uniprot.org/citations/17121840) PubMed: [18288108](http://www.uniprot.org/citations/18288108) PubMed: [18849968](http://www.uniprot.org/citations/18849968) PubMed: [19153609](http://www.uniprot.org/citations/19153609) PubMed: [21123384](http://www.uniprot.org/citations/21123384) PubMed: [22791714](http://www.uniprot.org/citations/22791714) PubMed: [25542899](http://www.uniprot.org/citations/25542899)). Exhibits potent antiviral activity against Vif-deficient HIV-1 (PubMed: [12167863](http://www.uniprot.org/citations/12167863) PubMed: [12859895](http://www.uniprot.org/citations/12859895) PubMed: [14557625](http://www.uniprot.org/citations/14557625) PubMed: [20219927](http://www.uniprot.org/citations/20219927) PubMed: [21835787](http://www.uniprot.org/citations/21835787) PubMed: [22807680](http://www.uniprot.org/citations/22807680) PubMed: [22915799](http://www.uniprot.org/citations/22915799) PubMed: [23097438](http://www.uniprot.org/citations/23097438) PubMed: [23152537](http://www.uniprot.org/citations/23152537) PubMed: [31397674](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/12808465) PubMed: [12808466](http://www.uniprot.org/citations/12808466) PubMed: [12809610](http://www.uniprot.org/citations/12809610) PubMed: [12970355](http://www.uniprot.org/citations/12970355) PubMed: [14528300](http://www.uniprot.org/citations/14528300) PubMed: [22807680](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/12808465) PubMed: [12808466](http://www.uniprot.org/citations/12808466) PubMed: [12809610](http://www.uniprot.org/citations/12809610) PubMed: [12970355](http://www.uniprot.org/citations/12970355) PubMed: [14528300](http://www.uniprot.org/citations/14528300)). Selectively targets single-stranded DNA and does not deaminate double-stranded DNA or single- or double-stranded RNA (PubMed: [12808465](http://www.uniprot.org/citations/12808465) PubMed: [12809610](http://www.uniprot.org/citations/12809610) PubMed: [12970355](http://www.uniprot.org/citations/12970355) PubMed: [14528300](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/15031497) PubMed: [16378963](http://www.uniprot.org/citations/16378963) PubMed: [18448976](http://www.uniprot.org/citations/18448976) PubMed: [19458006](http://www.uniprot.org/citations/19458006) PubMed: [20335265](http://www.uniprot.org/citations/20335265)). May inhibit the mobility of LTR and non-LTR retrotransposons (PubMed: [16527742](http://www.uniprot.org/citations/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)

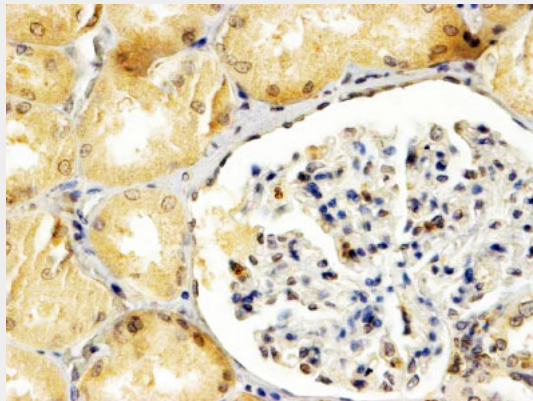
Tissue Location

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.

APOBEC3G / ARP9 Antibody (internal region) - 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](#)

APOBEC3G / ARP9 Antibody (internal region) - Images

AF2436a (4 µg/ml) staining of paraffin embedded Human Kidney. Steamed antigen retrieval with Tris/EDTA buffer pH 9, HRP-staining.

APOBEC3G / ARP9 Antibody (internal region) - References

Cellular APOBEC3G restricts HIV-1 infection in resting CD4(+) T cells. Chiu YL, Soros VB, Kreisberg JF, Stopak K, Yonemoto W, Greene WC. Nature. 2005 Apr 13; [Epub ahead of print] PMID: 15829920 ; 15809227