

Anti-APOBEC3G Picoband Antibody
Catalog # ABO12670

Specification

Anti-APOBEC3G Picoband Antibody - Product Information

Application	WB, IHC
Primary Accession	O9HC16
Host	Rabbit
Reactivity	Human
Clonality	Polyclonal
Format	Lyophilized

Description

Rabbit IgG polyclonal antibody for DNA dC->dU-editing enzyme APOBEC-3G(APOBEC3G) detection. Tested with WB, IHC-P in Human.

Reconstitution

Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Anti-APOBEC3G Picoband 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

Calculated MW

46408 MW KDa

Application Details

Immunohistochemistry(Paraffin-embedded Section), 0.5-1 µg/ml, Human, By Heat

Western blot, 0.1-0.5 µg/ml, Human

Subcellular Localization

Cytoplasm. Nucleus. Cytoplasm, P-body. Mainly cytoplasmic. Small amount are found in the nucleus. During HIV-1 infection, virion-encapsidated in absence of HIV-1 VIF.

Tissue Specificity

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. .

Protein Name

DNA dC->dU-editing enzyme APOBEC-3G

Contents

Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na₂HPO₄, 0.05mg Na₃N.

Immunogen

E.coli-derived human APOBEC3G recombinant protein (Position: E191-N384).

Purification

Immunogen affinity purified.

Cross Reactivity

No cross reactivity with other proteins

Storage

At -20°C for one year. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for a longer time. Avoid repeated freezing and thawing.

Anti-APOBEC3G Picoband 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](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, 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

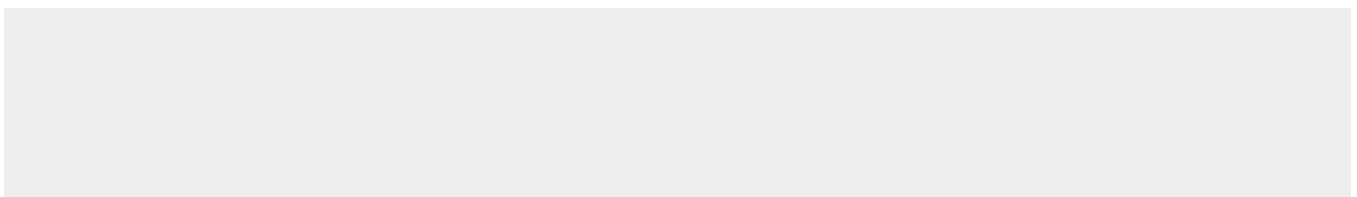
Expressed in spleen, testes, ovary and peripheral blood leukocytes and CD4+ lymphocytes. Also expressed in non-permissive peripheral blood mononuclear cells, and several tumor cell lines; no expression detected in permissive lymphoid and non-lymphoid cell lines Exists only in the LMM form in peripheral 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.

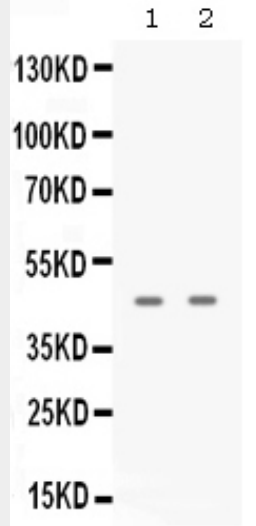
Anti-APOBEC3G Picoband Antibody - Protocols

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

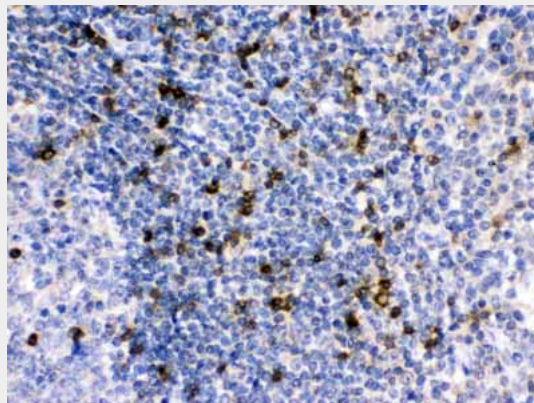
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

Anti-APOBEC3G Picoband Antibody - Images

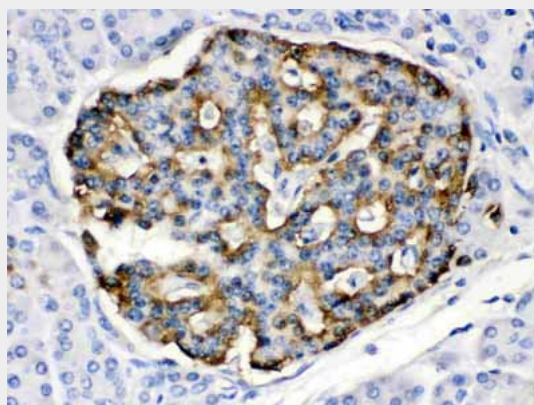




Western blot analysis of APOBEC3G expression in A431 whole cell lysates (lane 1), and JURKAT whole cell lysates (lane 2). APOBEC3G at 46KD was detected using rabbit anti- APOBEC3G Antigen Affinity purified polyclonal antibody (Catalog # ABO12670) at 0.5 μ g/mL. The blot was developed using chemiluminescence (ECL) method .



APOBEC3G was detected in paraffin-embedded sections of human tonsil tissues using rabbit anti- APOBEC3G Antigen Affinity purified polyclonal antibody (Catalog # ABO12670) at 1 μ g/mL. The immunohistochemical section was developed using SABC method .



APOBEC3G was detected in paraffin-embedded sections of human pancreatic cancer tissues using rabbit anti- APOBEC3G Antigen Affinity purified polyclonal antibody (Catalog # ABO12670) at 1 μ g/mL. The immunohistochemical section was developed using SABC method .

Anti-APOBEC3G Picoband Antibody - Background

APOBEC3G (apolipoprotein B mRNA editing enzyme, catalytic polypeptide-like 3G) is a human enzyme encoded by the APOBEC3G gene. 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.