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PHO1 Antibody (N-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP1354A

Product Information

Application	WB, IHC-P, E
Primary Accession	P31941
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	23012
Antigen Region	1-30

Additional Information

Gene ID	100913187;200315
Other Names	DNA dC->dU-editing enzyme APOBEC-3A, A3A, 354-, Phorbolin-1, APOBEC3A
Target/Specificity	This PHO1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 1-30 amino acids from the N-terminal region of human PHO1.
Dilution	WB~~1:1000 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	PHO1 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

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- 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.

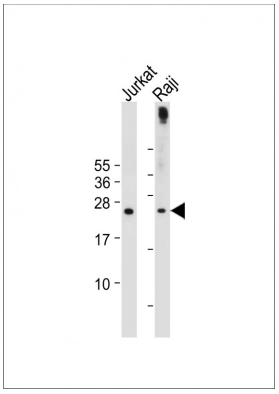
Background

PHO1 a member of the cytidine deaminase gene family. The PHO1 gene 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. This gene encodes a protein that lacks the zinc binding activity and may be an expressed pseudogene.

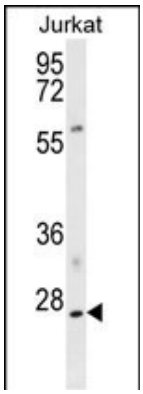
References

Wedekind, J.E., et al., Trends Genet. 19(4):207-216 (2003).
Jarmuz, A., et al., Genomics 79(3):285-296 (2002).
Madsen, P., et al., J. Invest. Dermatol. 113(2):162-169 (1999).

Images

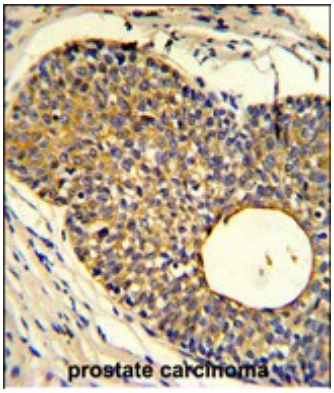


All lanes : Anti-hPHO1-M1 at 1:2000 dilution Lane 1: Jurkat whole cell lysate Lane 2: Raji whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 23 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



Western blot analysis of hPHO1-M1 (Cat. #AP1354a) in Jurkat cell line lysates (35ug/lane). PHO1 (arrow) was detected using the purified Pab.

Formalin-fixed and paraffin-embedded human prostate carcinoma reacted with PHO1 Antibody (N-term), which



was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.

Citations

- lncNBAT1/APOBEC3A is a mediator of HBX-induced chemoresistance in diffuse large B cell lymphoma cells
- Multiregion whole-genome sequencing depicts intratumour heterogeneity and punctuated evolution in ovarian clear cell carcinoma
- Baculovirus infection of human monocyte-derived dendritic cells restricts HIV-1 replication.
- Interaction of Vpx and apolipoprotein B mRNA-editing catalytic polypeptide 3 family member A (APOBEC3A) correlates with efficient lentivirus infection of monocytes.