

ARG63219 anti-APE1 antibody

Package: 100 µg
Store at: -20°C

Summary

Product Description	Goat Polyclonal antibody recognizes APE1
Tested Reactivity	Hu
Predict Reactivity	Cow, Dog, Pig
Tested Application	IHC-P, WB
Specificity	Reported variants represent identical protein (NP_001632.2; NP_542379.1; NP_542380.1).
Host	Goat
Clonality	Polyclonal
Isotype	IgG
Target Name	APE1
Species	Human
Immunogen	PKRGKKGAVAEDGD-C
Conjugation	Un-conjugated
Alternate Names	APE1; APX; AP endonuclease 1; HAP1; EC 4.2.99.18; Apurinic-apyrimidinic endonuclease 1; APEX; apurinic or apyrimidinic site; EC 3.1.-.-; REF1; Redox factor-1; APEX nuclease; REF-1; APE-1; DNA-; APEN; APE

Application Instructions

Application table	Application	Dilution
	IHC-P	4 - 6 µg/ml
	WB	0.1 - 0.3 µg/ml
Application Note	IHC-P: Antigen Retrieval: Steam tissue section in Tris/EDTA buffer (pH 9.0). WB: Recommend incubate at RT for 1h. * The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.	

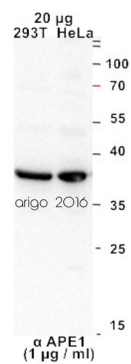
Properties

Form	Liquid
Purification	Purified from goat serum by antigen affinity chromatography.
Buffer	Tris saline (pH 7.3), 0.02% Sodium azide and 0.5% BSA.
Preservative	0.02% Sodium azide
Stabilizer	0.5% BSA
Concentration	0.5 mg/ml

Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C or below. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.
Note	For laboratory research only, not for drug, diagnostic or other use.

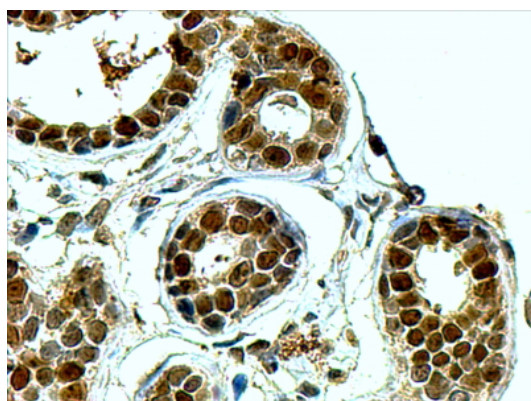
Bioinformation

Database links	GeneID: 328 Human Swiss-port # P27695 Human
Gene Symbol	APEX1
Gene Full Name	APEX nuclease (multifunctional DNA repair enzyme) 1
Background	<p>Apurinic/aprimidinic (AP) sites occur frequently in DNA molecules by spontaneous hydrolysis, by DNA damaging agents or by DNA glycosylases that remove specific abnormal bases. AP sites are pre-mutagenic lesions that can prevent normal DNA replication so the cell contains systems to identify and repair such sites. Class II AP endonucleases cleave the phosphodiester backbone 5' to the AP site. This gene encodes the major AP endonuclease in human cells. Splice variants have been found for this gene; all encode the same protein. [provided by RefSeq, Jul 2008]</p>
Research Area	Cell Biology and Cellular Response antibody; Gene Regulation antibody
Calculated Mw	36 kDa
PTM	<p>Phosphorylated. Phosphorylation by kinase PKC or casein kinase CK2 results in enhanced redox activity that stimulates binding of the FOS/JUN AP-1 complex to its cognate binding site. AP-endodeoxyribonuclease activity is not affected by CK2-mediated phosphorylation. Phosphorylation of Thr-233 by CDK5 reduces AP-endodeoxyribonuclease activity resulting in accumulation of DNA damage and contributing to neuronal death.</p> <p>Acetylated on Lys-6 and Lys-7. Acetylation is increased by the transcriptional coactivator EP300 acetyltransferase, genotoxic agents like H₂O₂ and methyl methanesulfonate (MMS). Acetylation increases its binding affinity to the negative calcium response element (nCaRE) DNA promoter. The acetylated form induces a stronger binding of YBX1 to the Y-box sequence in the MDR1 promoter than the unacetylated form. Deacetylated on lysines. Lys-6 and Lys-7 are deacetylated by SIRT1.</p> <p>Cleaved at Lys-31 by granzyme A to create the mitochondrial form; leading in reduction of binding to DNA, AP endodeoxynuclease activity, redox activation of transcription factors and to enhanced cell death. Cleaved by granzyme K; leading to intracellular ROS accumulation and enhanced cell death after oxidative stress.</p> <p>Cys-65 and Cys-93 are nitrosylated in response to nitric oxide (NO) and lead to the exposure of the nuclear export signal (NES).</p> <p>Ubiquitinated by MDM2; leading to translocation to the cytoplasm and proteasomal degradation.</p>



ARG63219 anti-APE1 antibody WB image

Western blot: 20 µg of 1) 293T and 2) HeLa cell lysates stained with ARG63219 anti-APE1 antibody at 1 µg/ml dilution.



ARG63219 anti-APE1 antibody IHC image

Immunohistochemistry: paraffin-embedded Human Breast. (Steamed antigen retrieval with Tris/EDTA buffer pH 9) stained with ARG63219 anti-APE1 antibody at 4 µg/ml dilution, followed by HRP-staining.