

APE1 Polyclonal Antibody

Catalog NumberPA5-17233

Product data sheet

Details		Species Reactivity	
Size	100 µL	Species reactivity	Human, Mouse, Non-human primate, Rat
Host/Isotope	Rabbit / IgG	Published species	Not Applicable
Class	Polyclonal	Tested Applications	
Type	Antibody	Dilution *	
Immunogen	Synthetic peptide corresponding to amino acids surrounding Ala230 of human Ape1	ChIP assay (ChIP)	3 µL/10^6 cells
Conjugate	Unconjugated	Western Blot (WB)	1:1,000
Form	Liquid	Immunocytochemistry (ICC/IF)	1:100
Storage Conditions	-20°C	* Suggested working dilutions are given as a guide only. It is recommended that the user titrate the product for use in their own experiment using appropriate negative and positive controls.	

Product specific information

It is not recommended to aliquot this antibody.

Background/Target Information

Mammalian apurinic/apyrimidinic endonuclease (APE/ref-1) is a multifunctional, bipartite enzyme that plays an important role in numerous, cellular functions. APE is responsible for repairing abasic sites in DNA and in regulating the redox state of other proteins that play roles in oxidative signaling, transcription factor regulation (Fos, Jun, NF-κB, Myb, HIF-1 alpha, CREB, Pax), cell cycle control (p53), and apoptosis. The most common form of DNA damage is the creation of abasic sites which are brought about through spontaneous loss or oxidative DNA damage, through chemically initiated hydrolysis (chemotherapy), ionizing radiation, UV irradiation, oxidizing agents, and removal of modified bases by DNA glycosylases. APE is differentially expressed during development and in different tissues. This protein has diverse subcellular localization patterns which support the possibility of its interaction with numerous, other cellular proteins in addition to DNA repair within the nucleus. Regulation of APE by phosphorylation is mediated, at least in part, by casein kinase II. Increases in APE message and protein levels are observed upon the reintroduction of oxygen to hypoxic cells, and in some malignant tissue relative to normal tissue. Decreases in APE expression have been associated with the induction of cellular apoptosis.

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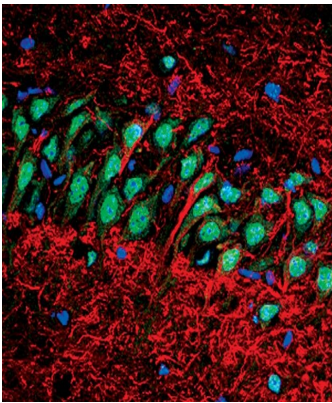
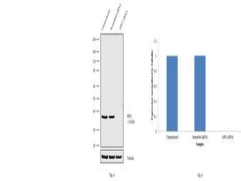
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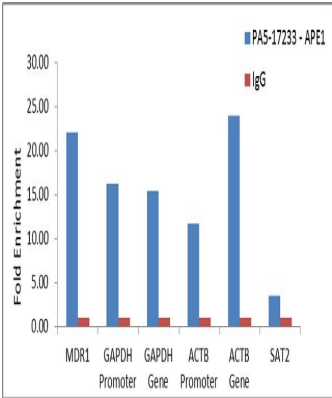
APE1 Antibody (PA5-17233)

Antibody specificity was demonstrated by siRNA mediated knockdown of target protein. HeLa cells were transfected with APE1 siRNA and reduction of signal was observed in Western Blot using APE1 Polyclonal Antibody (Product # PA5-17233). {KD}



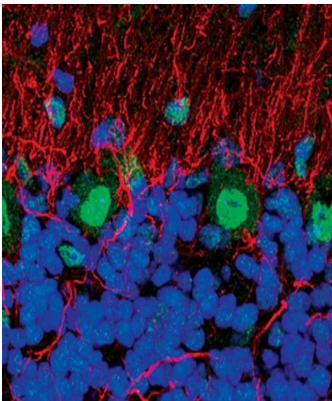
APE1 Antibody (PA5-17233) in IHC

Immunofluorescent analysis of Ape1 in normal mouse hippocampus using an Ape1 polyclonal antibody (Product # PA5-17233) (green) and a Neurofilament-H monoclonal antibody (red). DNA is labeled using a fluorescent blue dye.



APE1 Antibody (PA5-17233)

Antibody specificity was demonstrated by detection of enrichment of the target protein at specific gene loci. Chromatin Immunoprecipitation (ChIP) was performed using Anti-APE1 Rabbit Polyclonal Antibody (Product # PA5-17233) using PCR primer pairs over MDR1, GAPDH promoter and gene, ACTB promoter and gene (active) and SAT2 satellite repeats (inactive). {RE}



APE1 Antibody (PA5-17233) in IHC

Immunofluorescent analysis of Ape1 in normal mouse cerebellum using an Ape1 polyclonal antibody (Product # PA5-17233) (green) and a Neurofilament-H monoclonal antibody (red). DNA is labeled using a fluorescent blue dye.

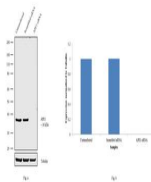
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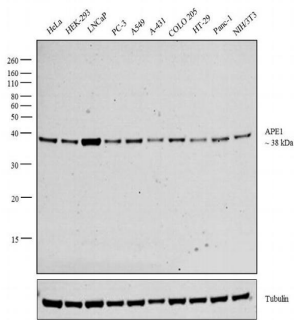
APE1 Antibody (PA5-17233) in WB

Knockdown of APE1 was achieved by transfecting HeLa cells with APE1 specific siRNAs (Silencer® select Product # s1445). Western blot analysis (Fig. a) was performed using modified whole cell extracts (1% SDS) APE1 knockdown cells (lane 3), non-specific scrambled siRNA transfected cells (lane 2) and untransfected cells (lane 1). The blots were probed with APE1 Polyclonal Antibody (Product # PA5-17233, 1:1000 dilution) and Goat anti-Rabbit IgG (H+L) Superclonal™ Secondary Antibody, HRP conjugate (Product # A27036, 1 mg/mL, 1:4000 dilution). Densitometric analysis of this western blot is shown in histogram (Fig. b). Decrease in signal upon siRNA mediated knock down confirms that antibody is specific to APE1.



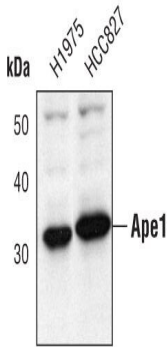
APE1 Antibody (PA5-17233) in WB

Western blot analysis was performed on modified whole cell extracts (1% SDS) (30 µg lysate) of HeLa (Lane 1), HEK-293 (Lane 2), LNCaP (Lane 3), PC-3 (Lane 4), A549 (Lane 5), A-431 (Lane 6), COLO 205 (Lane 7), HT-29 (Lane 8), Panc-1 (Lane 9) and NIH/3T3 (Lane 10). The blot was probed with Anti-APE1 Polyclonal Antibody (Product # PA5-17233, 1:1000 dilution) and detected by chemiluminescence using Goat anti-Rabbit IgG (H+L) Superclonal™ Secondary Antibody, HRP conjugate (Product # A27036, 0.25 µg/mL, 1:4000 dilution). A 38 kDa band corresponding to APE1 was observed across the cell lines tested.



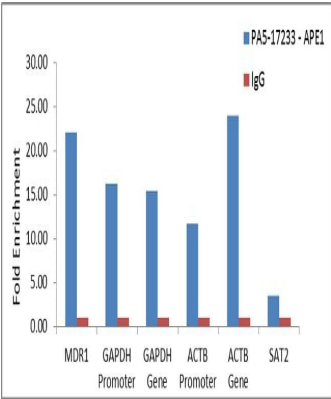
APE1 Antibody (PA5-17233) in WB

Western blot analysis of Ape1 in extracts from H1975 and HCC827 cells using Ape1 polyclonal antibody (Product # PA5-17233).



APE1 Antibody (PA5-17233) in ChIP

Enrichment of endogenous APE1 protein at specific gene loci using Anti-APE1 Antibody: Chromatin Immunoprecipitation (ChIP) was performed using Anti-APE1 Rabbit Polyclonal Antibody (Product # PA5-17233, 6 µl) on sheared chromatin from 2 million HeLa cells treated with Methyl methanesulphonate (1mM for 2 hours) using the MAGnify ChIP system kit (Product # 49-2024). Normal Rabbit IgG was used as a negative IP control. The purified DNA was analyzed by qPCR with PCR primer pairs over MDR1, GAPDH promoter and gene, ACTB promoter and gene (active) and SAT2 satellite repeats (inactive). Data is presented as fold enrichment of the antibody signal versus the negative control IgG using the comparative CT method.



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