

Basic Information

Product Name	Anti-APEX1 Antibody	
Gene Name	APEX1	
Source	Rabbit	
Isotype	IgG	
Species Reactivity	human, mouse, rat	
Tested Application	WB, IHC, IF, ICC/IF, FCM	
Contents	500 ug/ml antibody with PBS , 0.02% NaN ₃ , 1 mg BSA and 50% glycerol.	
Immunogen	E.coli-derived human APE1 recombinant protein (Position: P2-L318). Human APE1 shares 94% and 93% amino acid (aa) sequences identity with mouse and rat APE1, respectively.	
concentration	500 ug/ml	
Purification	Immunogen affinity purified.	
Observed MW	39KD	
Dilution Ratios	Western blot(WB):	1:500-2000
	Immunohistochemistry in paraffin section (IHC):	1:50-400
	Immunofluorescence (IF):	1:50-400
	Immunocytochemistry/Immunofluorescence (ICC/IF):	1:50-400
	Flow cytometry (FCM):	1-3 µg/1x10 ⁶ cells
	(Boiling the paraffin sections in 10mM citrate buffer,pH6.0,or PH8.0 EDTA repair liquid for 20 mins is required for the staining of formalin/paraffin sections.) Optimal working dilutions must be determined by end user.	

Storage

12 months from date of receipt, -20°C as supplied. 6 months 2 to 8°C after reconstitution. Avoid repeated freezing and thawing.

Background Information

APEX1, also called apurinic endonuclease (APE), is a DNA repair enzyme having apurinic/apyrimidinic (AP) endonuclease, 3-prime, 5-prime-exonuclease, DNA 3-prime repair diesterase, and DNA 3-prime-phosphatase activities. The human APEX1 gene consists of 5 exons spanning 2.64 kb and exists as a single copy in the haploid genome. Using in situ hybridization, the APEX1 gene is mapped to 14q11.2-q12. The predicted APEX1 protein, which contained probable nuclear transport signals, was identified as a member of a family of DNA repair enzymes found in lower organisms. The abundance of the large form of APEX1 was increased in leiomyoma extracts relative to myometrial tissue extracts, and the large form was dominant in cell lines derived from leiomyosarcomas. The exonuclease activity of nuclear APEX1 can remove the anti-HIV nucleoside analogs AZT and D4T from the 3-prime terminus of a nick more efficiently than can cytosolic exonucleases.

Selected Validation Data



Figure 1. Western blot analysis of anti- APEX1 antibody (PB9128). The sample well of each lane was loaded with 50ug of sample under reducing conditions.

Lane 1: Recombinant Human APEX1 Protein 0.5ng.

Use rabbit anti- APEX1 1:1000, probed with a goat anti-rabbit IgG- HRP secondary antibody. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002). A specific band was detected for APEX1 at approximately 45KD. The expected band size for APEX1 is at 45KD.

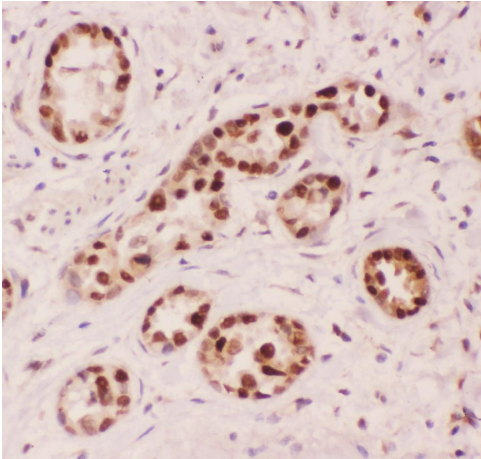


Figure 3. IHC analysis using anti- APEX1 antibody (PB9128). detected in paraffin-embedded section of human lung cancer tissue. Biotinylated goat anti-rabbit IgG was used as secondary antibody. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) (Catalog # SA1022) with DAB as the chromogen.

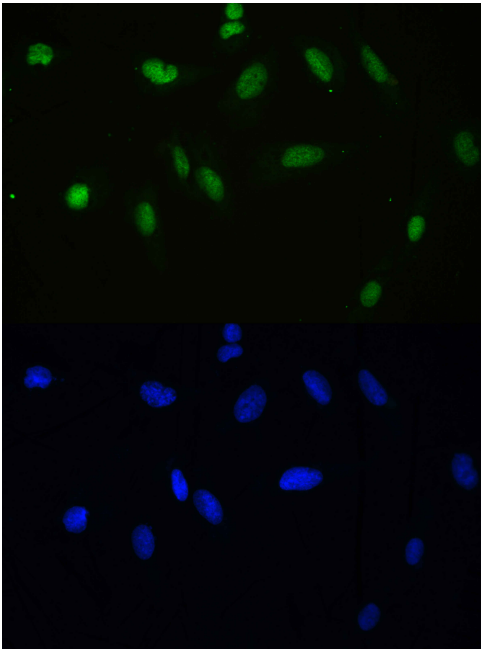


Figure 6. ICC analysis using anti- APEX1 antibody (PB9128). was detected in immersion fixed U20S cell line. Cells were stained using the Dylight488-conjugated Anti-rabbit IgG Secondary Antibody (green)(Catalog # BA1127) and counterstained with DAPI (blue).

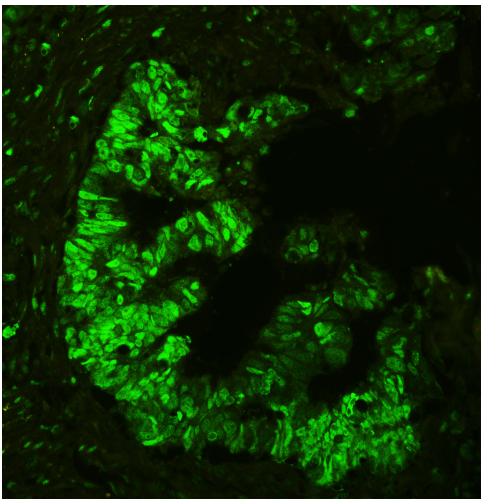


Figure 7. IF analysis using anti- APEX1 antibody (PB9128). detected in paraffin-embedded section of human colon cancer tissue. The tissue section were stained using the Dylight488-conjugated Anti-rabbit IgG Secondary Antibody (green) (Catalog # BA1127) and counterstained with DAPI (blue).

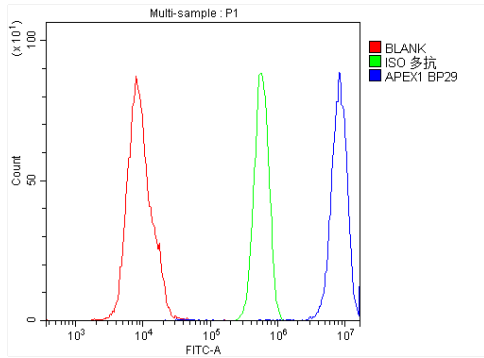


Figure 8. Flow cytometry analysis of U937 cell (1x10⁶) DyLight 488 conjugated goat anti- rabbit IgG(blue) was used as secondary antibody. Isotype control antibody (Green line) was rabbit IgG DyLight 488. Unlabelled sample (Red line).