

# APEX1 Recombinant monoclonal antibody

Catalog Number: 86719-3-RR

## Basic Information

<b>Catalog Number:</b> 86719-3-RR	<b>GenBank Accession Number:</b> BC002338	<b>Purification Method:</b> Protein A purification
<b>Size:</b> 100ul, Concentration: 1000 µg/ml by Nanodrop;	<b>GeneID (NCBI):</b> 328	<b>CloneNo.:</b> 251693B6
<b>Source:</b> Rabbit	<b>UNIPROT ID:</b> P27695	<b>Recommended Dilutions:</b> WB: 1:5000-1:50000 IF/ICC: 1:500-1:2000
<b>Isotype:</b> IgG	<b>Full Name:</b> APEX nuclease (multifunctional DNA repair enzyme) 1	
<b>Immunogen Catalog Number:</b> AG0251	<b>Calculated MW:</b> 36 kDa	
	<b>Observed MW:</b> 36 kDa	

## Applications

<b>Tested Applications:</b> WB, IF/ICC, ELISA	<b>Positive Controls:</b>
<b>Species Specificity:</b> human	<b>WB :</b> HeLa cells, HepG2 cells, HCT 116 cells, HEK-293 cells <b>IF/ICC :</b> MCF-7 cells, HepG2 cells

## Background Information

APEX1, also named as APE, APE1, HAP1 and REF-1, belongs to the DNA repair enzymes AP/ExoA family. It is a multifunctional protein that plays a central role in the cellular response to oxidative stress. The two major activities of APEX1 are in DNA repair and redox regulation of transcriptional factors. APEX nuclease 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. On the other hand, APEX1 also exerts reversible nuclear redox activity to regulate DNA binding affinity and transcriptional activity of transcriptional factors by controlling the redox status of their DNA-binding domain, such as the FOS/JUN AP-1 complex after exposure to IR. APEX1 is involved in calcium-dependent down-regulation of parathyroid hormone (PTH) expression by binding to negative calcium response elements (nCaREs). When acetylated at Lys-6 and Lys-7, APEX1 stimulates the YBX1-mediated MDR1 promoter activity, leading to drug resistance. It also acts as an endoribonuclease involved in the control of single-stranded RNA metabolism. It plays a role in regulating MYC mRNA turnover by preferentially cleaving in between UA and CA dinucleotides of the MYC coding region determinant (CRD). In association with NMD1, APEX1 plays a role in the rRNA quality control process during cell cycle progression.

## Storage

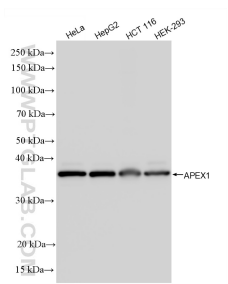
**Storage:**  
Store at -20°C. Stable for one year after shipment.  
**Storage Buffer:**  
PBS with 0.02% sodium azide and 50% glycerol, pH7.3  
 Aliquoting is unnecessary for -20°C storage

\*\*\* 20ul sizes contain 0.1% BSA

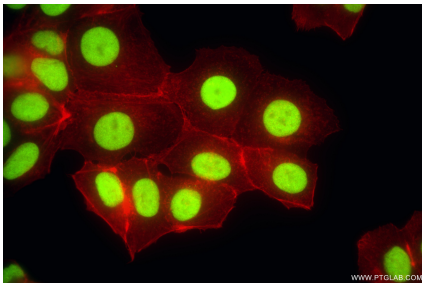
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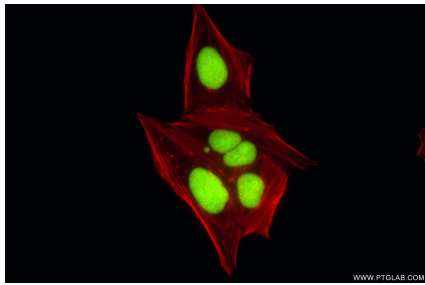
## Selected Validation Data



Various lysates were subjected to SDS PAGE followed by western blot with 86719-3-RR (APEX1 antibody) at dilution of 1:10000 incubated at room temperature for 1.5 hours.



Immunofluorescent analysis of (4% PFA) fixed MCF-7 cells using APEX1 antibody (86719-3-RR, Clone: 251693B6 ) at dilution of 1:1000 and CoraLite®488-Conjugated Goat Anti-Rabbit IgG(H+L) (SA00013-2), CL594-Phalloidin (red).



Immunofluorescent analysis of (4% PFA) fixed HepG2 cells using APEX1 antibody (86719-3-RR, Clone: 251693B6 ) at dilution of 1:1000 and CoraLite®488-Conjugated Goat Anti-Rabbit IgG(H+L) (SA00013-2), CL594-Phalloidin (red).