

For Research Use Only

# APEX1 Recombinant monoclonal antibody, PBS Only (Capture)

Catalog Number: 86719-3-PBS



## Basic Information

Catalog Number: 86719-3-PBS	GenBank Accession Number: BC002338	Purification Method: Protein A purification
Source: Rabbit	GeneID (NCBI): 328	CloneNo.: 251693B6
Isotype: IgG	UNIPROT ID: P27695	
Immunogen Catalog Number: AG0251	Full Name: APEX nuclease (multifunctional DNA repair enzyme) 1	
	Calculated MW: 36 kDa	
	Observed MW: 36 kDa	

## Applications

**Tested Applications:**  
WB, IF/ICC, Cytometric bead array, Sandwich ELISA, Indirect ELISA

**Species Specificity:**  
human

## 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 -80°C.  
**The product is shipped with ice packs. Upon receipt, store it immediately at -80°C**

**Storage Buffer:**  
PBS only, pH7.3

For technical support and original validation data for this product please contact:

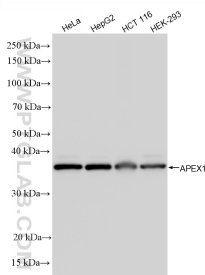
T: 4006900926

E: [Proteintech-CN@ptglab.com](mailto:Proteintech-CN@ptglab.com)

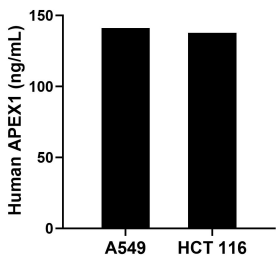
W: [ptgcn.com](http://ptgcn.com)

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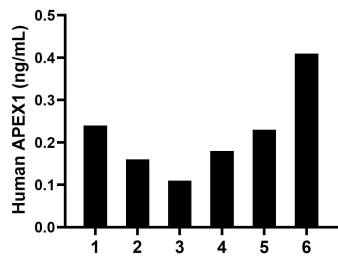
Selected Validation Data



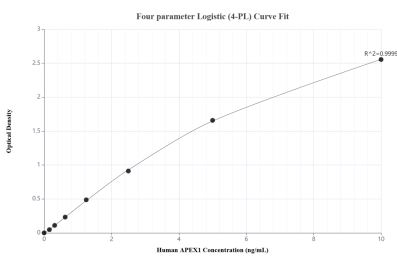
Various lysates were subjected to SDS PAGE followed by western blot with 86719-3-RR (APEX1 antibody) at dilution of 1:10000 incubated at room temperature for 1.5 hours. This data was developed using the same antibody clone with 86719-3-PBS in a different storage buffer formulation.



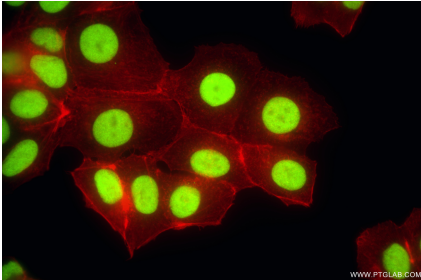
The mean APEX1 concentration was determined to be 141.21 ng/mL in A549 cell extract based on a 1.20 mg/mL extract load and 137.64 ng/mL in HCT 116 cell extract based on a 1.30 mg/mL extract load.



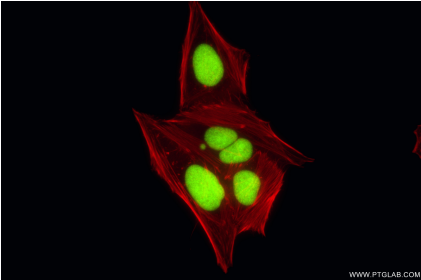
Plasma of six individual healthy human donors was measured. The APEX1 concentration of detected samples was determined to be 0.22 ng/mL with a range of 0.11-0.41 ng/mL.



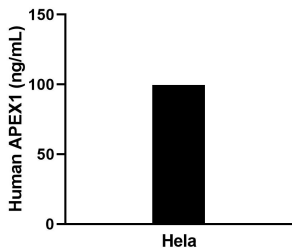
Sandwich ELISA standard curve of MP02621-2, Human APEX1 Recombinant Matched Antibody Pair - PBS only. 86719-3-PBS was coated to a plate as the capture antibody and incubated with serial dilutions of standard Ag0251. 86719-1-PBS was HRP conjugated as the detection antibody. Range: 0.156-10 ng/mL



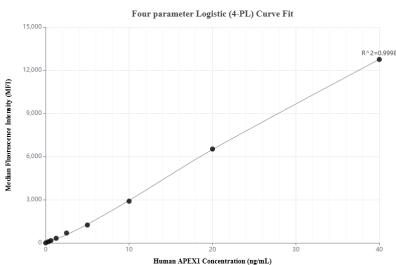
Immunofluorescent analysis of (4% PFA) fixed MCF-7 cells using APEX1 antibody (86719-3-RR, Clone: 251693B6) at dilution of 1:1000 and Coralite®488-Conjugated Goat Anti-Rabbit IgG(H+L) (SA00013-2), CL594-Phalloidin (red). This data was developed using the same antibody clone with 86719-3-PBS in a different storage buffer formulation.



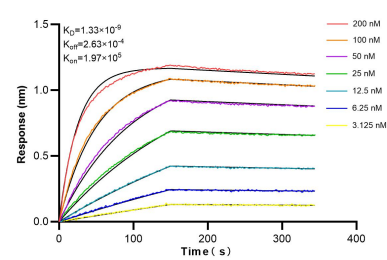
Immunofluorescent analysis of (4% PFA) fixed HepG2 cells using APEX1 antibody (86719-3-RR, Clone: 251693B6) at dilution of 1:1000 and Coralite®488-Conjugated Goat Anti-Rabbit IgG(H+L) (SA00013-2), CL594-Phalloidin (red). This data was developed using the same antibody clone with 86719-3-PBS in a different storage buffer formulation.



The mean APEX1 concentration was determined to be 101.1 ng/mL in HeLa cell extract based on a 1.2 mg/mL extract load.



Cytometric bead array standard curve of MP02621-1, APEX1 Recombinant Matched Antibody Pair, PBS Only. Capture antibody: 86719-3-PBS. Detection antibody: 86719-2-PBS. Standard: Ag0251. Range: 0.312-40 ng/mL



Bi-layer interferometry (BLI) kinetic assays of 86719-3-PBS against Human APEX1 were performed. The affinity constant is 1.33 nM.