

APEX1
Purified Mouse Monoclonal Antibody
Catalog # AO2532a**Specification**

APEX1 - Product Information

Application	WB, IHC, ICC, E
Primary Accession	P27695
Reactivity	Human, Rat, Monkey
Host	Mouse
Clonality	Monoclonal
Isotype	Mouse IgG1
Calculated MW	35.6kDa KDa

Immunogen

Purified recombinant fragment of human APEX1 (AA: 219-318) expressed in E. Coli.

Formulation

Purified antibody in PBS with 0.05% sodium azide

APEX1 - Additional Information

Gene ID 328

Other Names

APE; APX; APE1; APEN; APEX; HAP1; REF1

Dilution

WB~~ 1/500 - 1/2000

IHC~~ 1/200 - 1/1000

ICC~~N/A

E~~ 1/10000

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

APEX1 is for research use only and not for use in diagnostic or therapeutic procedures.

APEX1 - Protein Information

Name APEX1

Synonyms APE, APE1, APEX, APX, HAP1, REF1

Function

Multifunctional protein that plays a central role in the cellular response to oxidative stress. The two

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href="http://www.uniprot.org/citations/18579163" target="_blank">18579163, PubMed:8355688, PubMed:9108029). Involved in calcium-dependent down-regulation of parathyroid hormone (PTH) expression by binding to negative calcium response elements (nCaREs). Together with HNRNPL or the dimer XRCC5/XRCC6, associates with nCaRE, acting as an activator of transcriptional repression (PubMed:11809897, PubMed:14633989, PubMed:8621488). May also play a role in the epigenetic regulation of gene expression by participating in DNA demethylation (PubMed:21496894). Stimulates the YBX1-mediated MDR1 promoter activity, when acetylated at Lys-6 and Lys-7, leading to drug resistance (PubMed:18809583). Plays a role in protection from granzyme-mediated cellular repair leading to cell death (PubMed:18179823). Binds DNA and RNA. Associates, together with YBX1, on the MDR1 promoter. Together with NPM1, associates with rRNA (PubMed:19188445, PubMed:19401441, PubMed:20699270).

Cellular Location

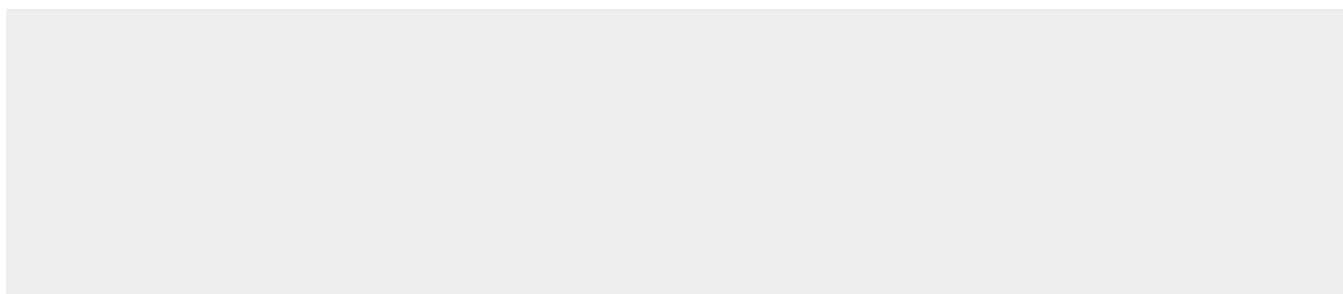
Nucleus {ECO:0000255|PROSITE-ProRule:PRU00764}. Nucleus, nucleolus. Nucleus speckle. Endoplasmic reticulum. Cytoplasm Note=Detected in the cytoplasm of B-cells stimulated to switch (By similarity). Colocalized with SIRT1 in the nucleus. Colocalized with YBX1 in nuclear speckles after genotoxic stress. Together with OGG1 is recruited to nuclear speckles in UVA-irradiated cells. Colocalized with nucleolin and NPM1 in the nucleolus. Its nucleolar localization is cell cycle dependent and requires active rRNA transcription. Colocalized with calreticulin in the endoplasmic reticulum. Translocation from the nucleus to the cytoplasm is stimulated in presence of nitric oxide (NO) and function in a CRM1-dependent manner, possibly as a consequence of demasking a nuclear export signal (amino acid position 64-80). S-nitrosylation at Cys-93 and Cys-310 regulates its nuclear-cytosolic shuttling. Ubiquitinated form is localized predominantly in the cytoplasm.

APEX1 - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

APEX1 - Images



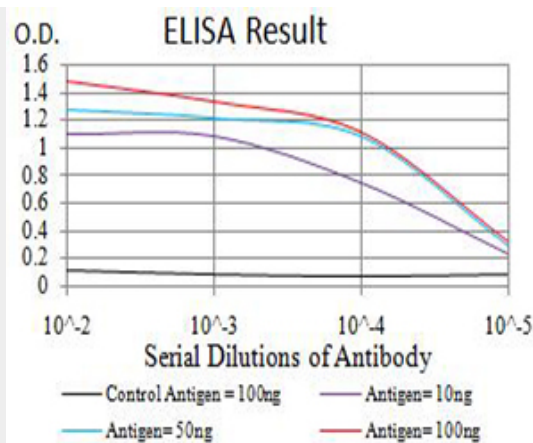


Figure 1: Black line: Control Antigen (100 ng); Purple line: Antigen (10ng); Blue line: Antigen (50 ng); Red line: Antigen (100 ng)

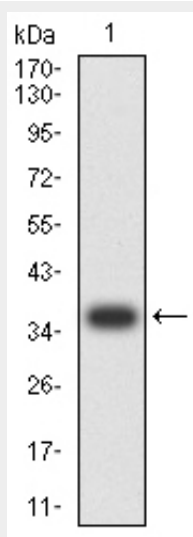


Figure 2: Western blot analysis using APEX1 mAb against human APEX1 (AA: 219-318) recombinant protein. (Expected MW is 37.4 kDa)

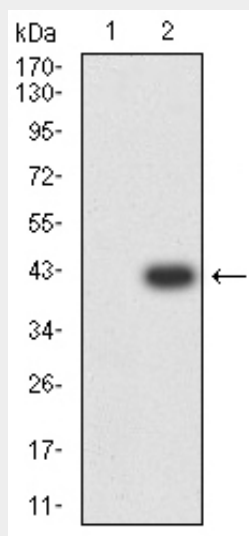


Figure 3: Western blot analysis using APEX1 mAb against HEK293 (1) and APEX1 (AA: 219-318)-hlgGfC transfected HEK293 (2) cell lysate.

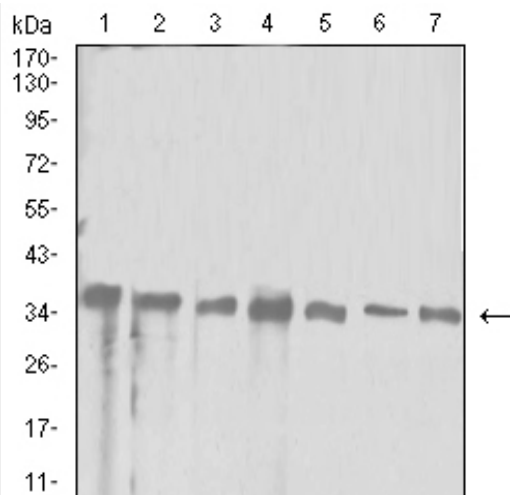


Figure 4: Western blot analysis using APEX1 mouse mAb against HeLa (1), Jurkat (2), SW480 (3), A431 (4), HepG2 (5), NIH/3T3 (6), and PC-12 (7) cell lysate.

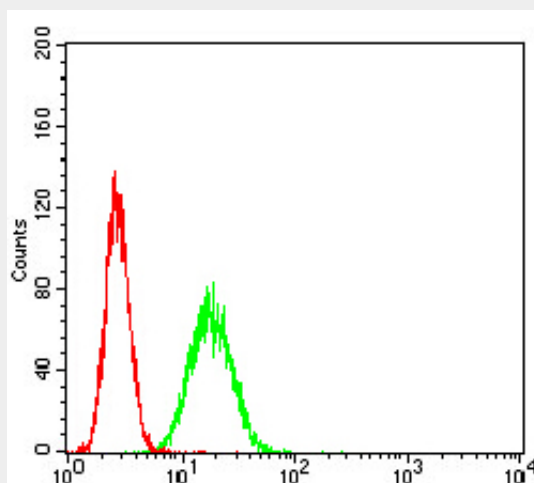


Figure 5: Flow cytometric analysis of HeLa cells using APEX1 mouse mAb (green) and negative control (red).

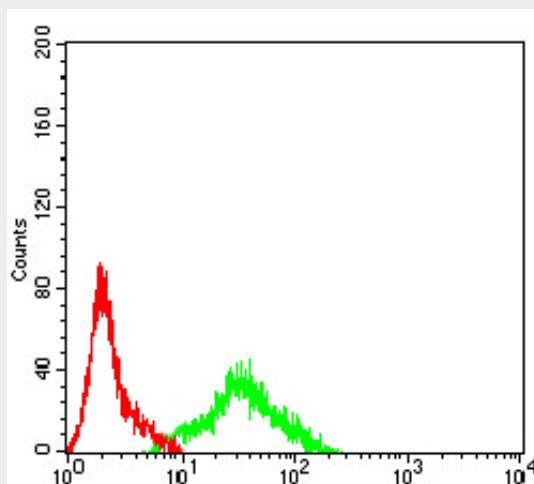


Figure 6: Flow cytometric analysis of SK-N-SH cells using APEX1 mouse mAb (green) and negative control (red).

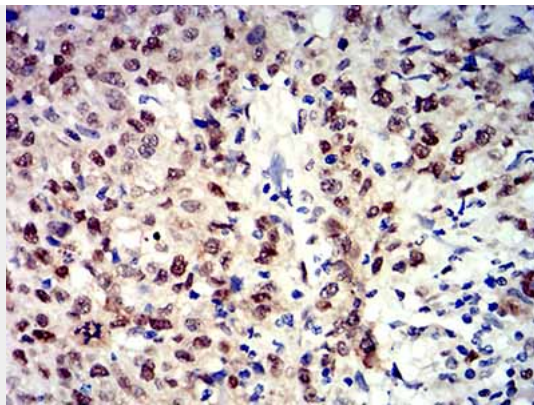


Figure 7: Immunohistochemical analysis of paraffin-embedded breast cancer tissues using APEX1 mouse mAb with DAB staining.

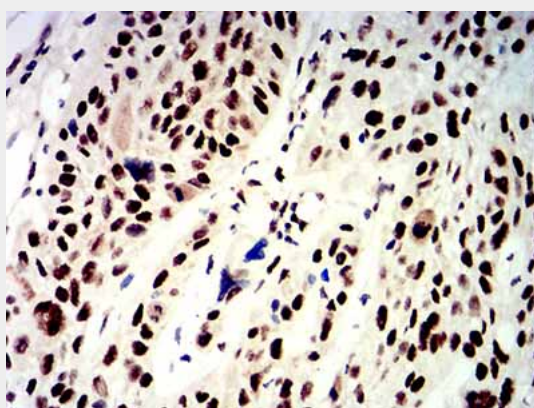


Figure 8: Immunohistochemical analysis of paraffin-embedded esophageal cancer tissues using APEX1 mouse mAb with DAB staining.

APEX1 - References

1. Mutat Res Genet Toxicol Environ Mutagen. 2015 Nov;793:19-29.
2. PLoS One. 2015 Dec 1;10(12):e0143289.