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APEX2 Antibody
Rabbit Polyclonal Antibody
Catalog # ALS12062

Specification

APEX2 Antibody - Product Information

Application	**WB, IHC**
Primary Accession	Q9UBZ4
Reactivity	**Human, Rabbit, Monkey, Pig, Bovine, Dog**
Host	**Rabbit**
Clonality	**Polyclonal**
Calculated MW	**57kDa KDa**

APEX2 Antibody - Additional Information

Gene ID 27301

Other Names
DNA-(apurinic or apyrimidinic site) lyase 2, 3.1.-.-, 4.2.99.18, AP endonuclease XTH2, APEX nuclease 2, APEX nuclease-like 2, Apurinic-apyrimidinic endonuclease 2, AP endonuclease 2, APEX2, APE2, APEXL2, XTH2

Target/Specificity
Synthetic peptides of human APEXL2.

Reconstitution & Storage
Store at 4°C for short term applications. For long term storage, aliquot and store at -20°C.

Precautions
APEX2 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

APEX2 Antibody - Protein Information

Name APEX2

Synonyms APE2, APEXL2, XTH2

Function
Functions as a weak apurinic/apyrimidinic (AP) endodeoxyribonuclease in the DNA base excision repair (BER) pathway of DNA lesions induced by oxidative and alkylating agents (PubMed:16687656). Initiates repair of AP sites in DNA by catalyzing hydrolytic incision of the phosphodiester backbone immediately adjacent to the damage, generating a single-strand break with 5'-deoxyribose phosphate and 3'-hydroxyl ends. Also displays double-stranded DNA 3'-5' exonuclease, 3'-phosphodiesterase activities (PubMed:16687656, PubMed:19443450, PubMed:32516598). Shows robust 3'-5' exonuclease activity on 3'-recessed

heteroduplex DNA and is able to remove mismatched nucleotides preferentially (PubMed:16687656, PubMed:19443450). Also exhibits 3'-5' exonuclease activity on a single nucleotide gap containing heteroduplex DNA and on blunt-ended substrates (PubMed:16687656). Shows fairly strong 3'-phosphodiesterase activity involved in the removal of 3'-damaged termini formed in DNA by oxidative agents (PubMed:16687656, PubMed:19443450). In the nucleus functions in the PCNA-dependent BER pathway (PubMed:11376153). Plays a role in reversing blocked 3' DNA ends, problematic lesions that preclude DNA synthesis (PubMed:32516598). Required for somatic hypermutation (SHM) and DNA cleavage step of class switch recombination (CSR) of immunoglobulin genes (By similarity). Required for proper cell cycle progression during proliferation of peripheral lymphocytes (By similarity).

Cellular Location
Nucleus {ECO:0000255|PROSITE-ProRule:PRU00764, ECO:0000269|PubMed:11376153, ECO:0000269|PubMed:19443450}. Cytoplasm Mitochondrion. Note=Together with PCNA, is redistributed in discrete nuclear foci in presence of oxidative DNA damaging agents.

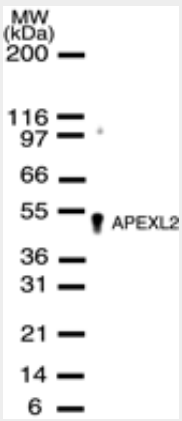
Tissue Location
Highly expressed in brain and kidney. Weakly expressed in the fetal brain.

APEX2 Antibody - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

APEX2 Antibody - Images



Western blot of APEXL2 in HeLa cell lysates using antibody at a dilution of 1:500.

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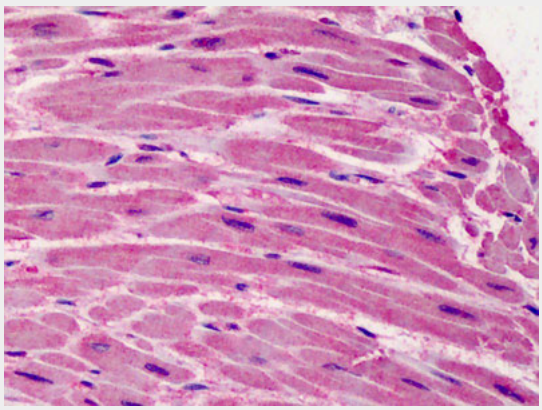

Anti-APEX2 antibody IHC of human heart.

APEX2 Antibody - Background

Function as a weak apurinic/apyrimidinic (AP) endodeoxyribonuclease in the DNA base excision repair (BER) pathway of DNA lesions induced by oxidative and alkylating agents. Initiates repair of AP sites in DNA by catalyzing hydrolytic incision of the phosphodiester backbone immediately adjacent to the damage, generating a single-strand break with 5'-deoxyribose phosphate and 3'-hydroxyl ends. Displays also double-stranded DNA 3'-5' exonuclease, 3'-phosphodiesterase activities. Shows robust 3'-5' exonuclease activity on 3'-recessed heteroduplex DNA and is able to remove mismatched nucleotides preferentially. Shows fairly strong 3'-phosphodiesterase activity involved in the removal of 3'-damaged termini formed in DNA by oxidative agents. In the nucleus functions in the PCNA-dependent BER pathway. Required for somatic hypermutation (SHM) and DNA cleavage step of class switch recombination (CSR) of immunoglobulin genes. Required for proper cell cycle progression during proliferation of peripheral lymphocytes.

APEX2 Antibody - References

Tsuchimoto D.,et al.Nucleic Acids Res. 29:2349-2360(2001).
Luna L.,et al.Submitted (SEP-1998) to the EMBL/GenBank/DDBJ databases.
Akiyama K.,et al.Submitted (DEC-1998) to the EMBL/GenBank/DDBJ databases.
Hadi M.Z.,et al.Submitted (JAN-1999) to the EMBL/GenBank/DDBJ databases.
Ross M.T.,et al.Nature 434:325-337(2005).