

Anti-APEX2 Antibody
Catalog # ABO10814**Specification**

Anti-APEX2 Antibody - Product Information

Application	WB, IHC
Primary Accession	Q9UBZ4
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized

Description

Rabbit IgG polyclonal antibody for DNA-(apurinic or apyrimidinic site) lyase 2(APEX2) detection. Tested with WB, IHC-P in Human;Mouse;Rat.

Reconstitution

Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Anti-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

Calculated MW

57401 MW KDa

Application Details

Immunohistochemistry(Paraffin-embedded Section), 0.5-1 µg/ml, Human, Rat, Mouse, By Heat
Western blot, 0.1-0.5 µg/ml, Human, Mouse, Rat

Subcellular Localization

Nucleus. Cytoplasm. Mitochondrion . Together with PCNA, is redistributed in discrete nuclear foci in presence of oxidative DNA damaging agents.

Tissue Specificity

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

Protein Name

DNA-(apurinic or apyrimidinic site) lyase 2

Contents

Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na₂HPO₄, 0.05mg Thimerosal, 0.05mg NaN₃.

Immunogen

A synthetic peptide corresponding to a sequence at the C-terminus of human APEX2(504-518aa

DPSSRCNFFLSRPS), identical to the related rat and mouse sequences.

Purification

Immunogen affinity purified.

Cross Reactivity

No cross reactivity with other proteins

Storage

At -20°C for one year. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for a longer time. Avoid repeated freezing and thawing.

Sequence Similarities

Belongs to the DNA repair enzymes AP/ExoA family.

Anti-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.

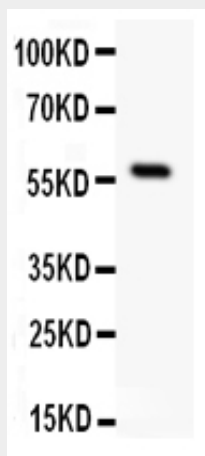
Tissue Location

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

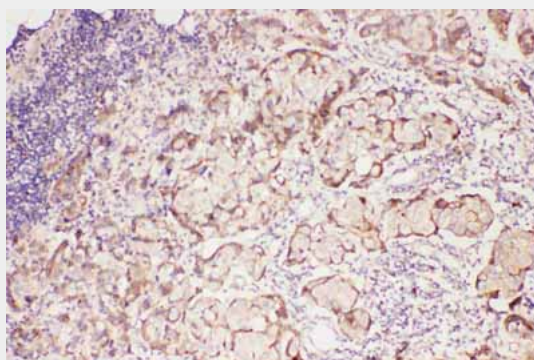
Anti-APEX2 Antibody - Protocols

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

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

Anti-APEX2 Antibody - Images

Anti- APEX2 antibody, ABO10814, Western blottingAll lanes: Anti APEX2 (ABO10814) at 0.5ug/mlWB: SMMC Whole Cell Lysate at 40ugPredicted bind size: 57KDObserved bind size: 57KD



Anti- APEX2 antibody, ABO10814, IHC(P)IHC(P): Human Mammary Cancer Tissue

Anti-APEX2 Antibody - Background

APEX2, also called apurinic/apyrimidinic endonuclease like-2, is a member of the apurinic/apyrimidinic (AP) family of endonucleases that initiate the repair of AP sites formed by spontaneous hydrolysis of the N-glycosylic bond, mutagen-induced base release, or damaged-base

excision by a DNA repair glycosylase. RT-PCR detected APEX2 expression in HeLa cells, Jurkat cells, and human kidney, brain and fetal brain tissue. The APEX2 gene contains 6 exons. The APEX2 gene is mapped to chromosome Xp11.21. APEX2 participates in both nuclear and mitochondrial base excision repair (BER). APEX2 displayed weaker AP site-specific and 3-prime nuclease activities compared to APEX1. APEX2 plays a role in processing 3-prime-damaged termini or 3-prime-mismatched nucleotides.