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Anti-APEX2 Picoband Antibody

Catalog # ABO10332

Product Information

Application	WB
Primary Accession	Q9UBZ4
Host	Rabbit
Reactivity	Human, Rat
Clonality	Polyclonal
Format	Lyophilized
Description	Rabbit IgG polyclonal antibody for DNA-(apurinic or apyrimidinic site) lyase 2(APEX2) detection. Tested with WB in Human;Rat.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

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
Application Details	Western blot, 0.1-0.5 □g/ml, Rat, Human
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. .
Source	Eukaryota
Protein Name	DNA-(apurinic or apyrimidinic site) lyase 2
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.
Immunogen	E.coli-derived human APEX2 recombinant protein (Position: L102-A210). Human APEX2 shares 91.7% amino acid (aa) sequence identity with mouse APEX2.
Purification	Immunogen affinity purified.
Cross Reactivity	No cross reactivity with other proteins.
Storage	At -20˚C for one year. After r˚Constitution, 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.

Protein Information

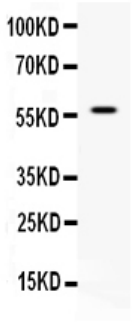
Name	APEX2
Synonyms	APE2, APEXL2, XTH2
Function	Functions as a weak apurinic/apyrimidinic (AP) endodeoxyribonuclease in the DNA base excision repair (BER) pathway of DNA lesions induced by oxidative and alkylating agents (PubMed:16687656). Initiates repair of AP sites in DNA by catalyzing hydrolytic 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.

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 is mapped to chromosome Xp11.21. APEX2 participates in both nuclear and mitochondrial base excision repair (BER) and it can play a role in processing 3-prime-damaged termini or 3-prime-mismatched nucleotides. Additionally, APEX2 displayed weaker AP site-specific and 3-prime nuclease activities compared to APEX1.

Images

Western blot analysis of APEX2 expression in rat kidney extract (lane 1). APEX2 at 57KD was detected using rabbit anti- APEX2 Antigen Affinity purified polyclonal antibody (Catalog # ABO10332) at 0.5 □¼g/mL. The blot was developed using chemiluminescence (ECL) method .



Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.