

Rabbit anti-Human Ref-1 Polyclonal Antibody | anti-Ref-1 antibody

Ref-1 (Acetyl Lys7) Polyclonal Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA293471	Rabbit	Human	Western Blot

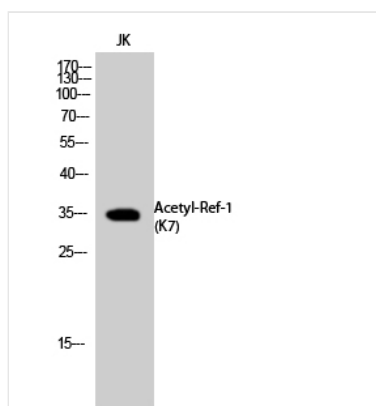
PRODUCT SYNONYMS

Ref-1; Polyclonal Antibody; Ref-1 (Acetyl Lys7) Polyclonal Antibody; APEX1; APE; APE1; APEX; APX; HAP1; REF1; DNA- (apurinic or apyrimidinic site) lyase; APEX nuclease; APEN; Apurinic-apyrimidinic endonuclease 1; AP endonuclease 1; APE-1; REF-1; Redox factor-1; anti-Ref-1 antibody

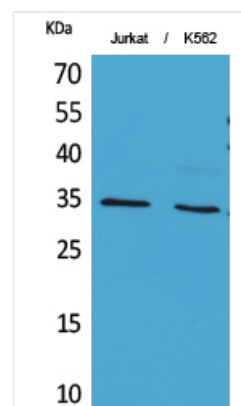
PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human
Clonality	Polyclonal
Applicable Applications for anti-Ref-1 antibody	WB (Western Blot)
Cellular Location	Nucleus. 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.
Preparation and Storage	Maintain refrigerated at 2-8 degree C for up to 2 weeks. For long term storage store at -20 degree C in small aliquots to prevent freeze-thaw cycles.

IMAGES


WB (Western Blot)

Dilution: Western Blot: 1/500 - 1/2000. ELISA: 1/20000. Not yet tested in other applications.


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ADDITIONAL INFORMATION

Related Product Information for anti-Ref-1 antibody	Multifunctional protein that plays a central role in the cellular response to oxidative stress. The two major activities of APEX1 are DNA repair and redox regulation of transcriptional factors. Functions as a apurinic/aprimidinic (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. Does also incise at AP sites in the DNA strand of DNA/RNA hybrids, single-stranded DNA regions of R-loop structures, and single-stranded RNA molecules. Has a 3'-5' exoribonuclease activity on mismatched deoxyribonucleotides at the 3' termini of nicked or gapped DNA molecules during short-patch BER. Possesses a DNA 3' phosphodiesterase activity capable of removing lesions (such as phosphoglycolate) blocking the 3' side of DNA strand breaks. May also play a role in the epigenetic regulation of gene expression by participating in DNA demethylation. Acts as a loading factor for POLB onto non-incised AP sites in DNA and stimulates the 5'-terminal deoxyribose 5'- phosphate (dRp) excision activity of POLB. Plays a role in the protection from granzymes-mediated cellular repair leading to cell death. Also involved in the DNA cleavage step of class switch recombination (CSR). 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. 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. Stimulates the YBX1-mediated MDR1 promoter activity, when acetylated at Lys-6 and Lys-7, leading to drug resistance. Acts also as an endoribonuclease involved in the control of single-stranded RNA metabolism. 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, plays a role in the rRNA quality control process during cell cycle progression. Associates, together with YBX1, on the MDR1 promoter. Together with NPM1, associates with rRNA. Binds DNA and RNA.
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NCBI AND UNIPROT INFORMATION

NCBI GI #	346644849
NCBI GeneID	328
NCBI Accession #	NP_001231178.1
NCBI GenBank Nucleotide #	NM_001244249.1
UniProt Accession #	P27695; Q969L5; Q99775
Molecular Weight	35,555 Da
NCBI Official Full Name	DNA-(apurinic or apyrimidinic site) lyase
NCBI Official Synonym Full Names	APEX nuclease (multifunctional DNA repair enzyme) 1
NCBI Official Symbol	APEX1
NCBI Official Synonym Symbols	APE; APX; APE1; APEN; APEX; HAP1; REF1
NCBI Protein Information	DNA-(apurinic or apyrimidinic site) lyase; DNA-(apurinic or apyrimidinic site) lyase; AP lyase; protein REF-1; redox factor-1; AP endonuclease class I; apurinic-apyrimidinic endonuclease 1; apurinic/aprimidinic (abasic) endonuclease; deoxyribonuclease (a
UniProt Protein Name	DNA-(apurinic or apyrimidinic site) lyase
UniProt Gene Name	APEX1
UniProt Synonym Gene Names	APE; APE1; APEX; APX; HAP1; REF1; APEN; AP endonuclease 1; APE-1
UniProt Entry Name	APEX1_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.