

Product datasheet for RC201732

APE1 (APEX1) (NM_001641) Human Tagged ORF Clone

Product data:

Product Type: Expression Plasmids
Product Name: APE1 (APEX1) (NM_001641) Human Tagged ORF Clone
Tag: Myc-DDK
Symbol: APEX1
Synonyms: APE; APE1; APEN; APEX; APX; HAP1; REF1
Vector: pCMV6-Entry (PS100001)
E. coli Selection: Kanamycin (25 ug/mL)
Cell Selection: Neomycin
ORF Nucleotide Sequence: >RC201732 representing NM_001641
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGGATCGCC**

ATGCCGAAGCGTGGGAAAAGGGAGCGGTGGCGGAAGACGGGGATGAGCTCAGGACAGAGCCAGAGGCCA
AGAAGAGTAAGACGGCCGCAAAGAAAAATGACAAAGAGGCAGCAGGAGAGGGCCAGCCCTGTATGAGGA
CCCCCAGATCAGAAAACCTCACCCAGTGGCAAACCTGCCACACTCAAGATCTGCTCTTGGAAATGTGGAT
GGGCTTCGAGCCTGGATTAAGAAGAAAGGATTAGATTGGGTAAAGGAAGAAGCCCCAGATATACTGTGCC
TTCAAGAGACCAAATGTTTCAGAGAACAACCTACCAGCTGAACTTCAGGAGCTGCCTGGACTCTCTCATCA
ATACTGGTCAGCTCCTTCGGACAAGGAAGGGTACAGTGGCGTGGGCTGCTTTCCCGCCAGTGCCCACTC
AAAGTTTCTTACGGCATAGGCGAGGAGGAGCATGATCAGGAAGGCCGGGTGATTGTGGCTGAATTTGACT
CGTTTGTGCTGGTAACAGCATATGTACCTAATGCAGGCCGAGGTCTGGTACGACTGGAGTACCGGCAGCG
CTGGGATGAAGCCTTTCGCAAGTTCCTGAAGGGCCTGGCTTCCGAAAGCCCTTGTGCTGTGTGGAGAC
CTCAATGTGGCACATGAAGAAATGACCTTCGCAACCCCAAGGGGAACAAAAAGAATGCTGGCTTACGC
CACAAGAGCGCCAAGGCTTCGGGAATTACTGCAGGCTGTGCCACTGGCTGACAGCTTTAGGCACCTCTA
CCCAACACACCCTATGCCTACACCTTTTGGACTTATATGATGAATGCTCGATCCAAGAATGTTGGTTGG
CGCCTTGATTACTTTTTGTGTCCCACTCTCTGTACCTGCATTGTGTGACAGCAAGATCCGTTCCAAGG
CCCTCGGCAGTGATCACTGTCCTATCACCTATACCTAGCACTG

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA



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Protein Sequence: >RC201732 representing NM_001641
Red=Cloning site Green=Tags(s)

MPKRGKKGAVAEDGDELRTPEAKKSKTAAKNDKEAAGEPALYEDPPDQKTSPSGKPATLKICSWNV
 GLRAWIKKKGLDWVKEEAPDILCLQETKCSENKLPALQELPGLSHQYWSAPSDKEGYSVGLLSRQCPL
 KVSYGIGEEHDQEGRVI VAEFDSFVLVTAYVPNAGRGLVRLEYRQRWDEAFKFLKGLASRKPLVLCGD
 LNVAAHEEIDLRNPKGNKKNAGFTPQERQGF GELLQAVPLADSFRLHYPNTPYAYTFWYMMNARSKNVGW
 RLDYFLLSHSLLPALCDSKIRSKALGSDHCPITLYLAL

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

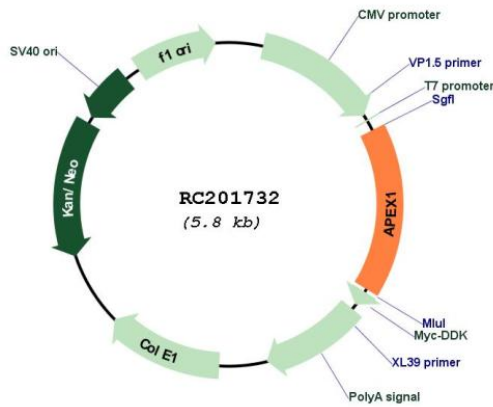
Chromatograms: https://cdn.origene.com/chromatograms/mg2453_d06.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



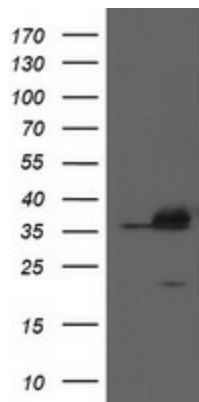
Plasmid Map:



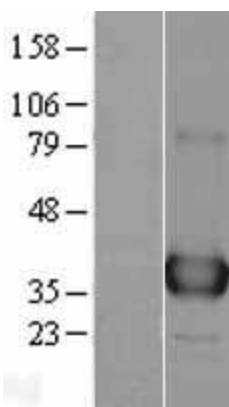
ACCN: NM_001641

ORF Size:	954 bp
OTI Disclaimer:	The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. More info
OTI Annotation:	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
Components:	The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).
Reconstitution Method:	<ol style="list-style-type: none">1. Centrifuge at 5,000xg for 5min.2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.3. Close the tube and incubate for 10 minutes at room temperature.4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.
RefSeq:	NM_001641.4
RefSeq Size:	1574 bp
RefSeq ORF:	957 bp
Locus ID:	328
UniProt ID:	P27695
Cytogenetics:	14q11.2
Domains:	Exo_endo_phos
Protein Families:	Druggable Genome, Stem cell - Pluripotency, Transcription Factors
Protein Pathways:	Base excision repair
MW:	35.4 kDa
Gene Summary:	The APEX gene encodes the major AP endonuclease in human cells. It encodes the APEX endonuclease, a DNA repair enzyme with apurinic/apyrimidinic (AP) activity. Such AP activity sites occur frequently in DNA molecules by spontaneous hydrolysis, by DNA damaging agents or by DNA glycosylases that remove specific abnormal bases. The AP sites are the most frequent pre-mutagenic lesions that can prevent normal DNA replication. Splice variants have been found for this gene; all encode the same protein. Disruptions in the biological functions related to APEX are associated with many various malignancies and neurodegenerative diseases.[provided by RefSeq, Dec 2019]

Product images:



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY APEX1 (Cat# RC201732, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-APEX1 (Cat# [TA800334]). Positive lysates [LY400618] (100ug) and [LC400618] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY400618]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC201732 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).