

Product datasheet for **SC119121**

APE1 (APEX1) (NM_001641) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	APE1 (APEX1) (NM_001641) Human Untagged Clone
Tag:	Tag Free
Symbol:	APE1
Synonyms:	APE; APE1; APEN; APEX; APX; HAP1; REF1
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL5</u>
E. coli Selection:	Ampicillin (100 ug/mL)
Fully Sequenced ORF:	>NCBI ORF sequence for NM_001641, the custom clone sequence may differ by one or more nucleotides

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ATGCCGAAGCGTGGGAAAAAGGGAGCGGTGGCGGAAGACGGGGATGAGCTCAGGACAGAGCCAGAGGCCA
AGAAGAGTAAGACGGCCGCAAAGAAAAATGACAAAGAGGCAGCAGGAGAGGGCCAGCCCTGTATGAGGA
CCCCCAGATCAGAAAACCTCACCCAGTGGCAAACCTGCCACACTCAAGATCTGCTCTTGGAAATGTGGAT
GGGCTTCGAGCCTGGATTAAGAAGAAAGGATTAGATTGGGTAAGGAAGAAGCCCCAGATATACTGTGCC
TTCAAGAGACCAAATGTTCAAGAACAACTACCAGCTGAACTTCAGGAGCTGCCTGGACTCTCTCATCA
ATACTGGTCAGCTCCTTCGGACAAGGAAGGTACAGTGGCGTGGCCTGCTTTCCCGCCAGTGCCCACTC
AAAGTTTCTTACGGCATAGGCGATGAGGAGCATGATCAGGAAGGCCGGGTGATTGTGGCTGAATTTGACT
CGTTTGTGCTGGTAACAGCATATGTACCTAATGCAGGCCGAGGTCTGGTACGACTGGAGTACCGGCAGCG
CTGGGATGAAGCCTTTCGCAAGTTCCTGAAGGGCCTGGCTTCCCGAAAGCCCCTTGTGCTGTGTGGAGAC
CTCAATGTGGCAGATGAAGAAATTGACCTTCGCAACCCCAAGGGGAACAAAAAGAATGCTGGCTTACCGC
CACAAGAGCGCCAAGGCTTCGGGAATTACTGCAGGCTGTGCCACTGGCTGACAGCTTTAGGCACCTCTA
CCCCAACACACCCTATGCCTACACCTTTTGGACTTATATGATGAATGCTCGATCCAAGAATGTTGGTTGG
CGCCTTGATTACTTTTTGTTGTCCCACTCTCTGTTACCTGCATTGTGTGACAGCAAGATCCGTTCCAAGG
CCCTCGGCAGTGATCACTGTCTATCACCTATACCTAGCACTGTGA

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5' Read Nucleotide Sequence:	<p>>OriGene 5' read for NM_001641 unedited</p> <p>TATTTTGTAAACGACTCACTATAGNNGCGGCCGCGAAATTCGGCACGAGGGTTAGGAG GAGCTAGGCTGCCATCGGGCCGGTGAGATACGGGGTTGCTCTTTTGGCTATAAGAGGGG CTTCGCTGGCAGTCTGAACGGCAAGCTTGAGTCAGGACCTTAATTAAGATCCTCAATTG GCTGGAGGGCAGATCTCGCGAGTAGGGCAACGCGGTAAAAATATTGCTTCGGTGGGTGAC GCGGTACAGTGCCTCAAGGGCGTTCTGTAACGGGAATGCCGAAGCGTGGGAAAAAGGGAGC GGTGGCGGAAGACGGGGATGAGCTCAGGACAGAGCCAGAGGCCAAGAAGAGTAAGACGGC CGCAAAGAAAAATGACAAAGAGGCAGCAGGAGAGGGCCAGCCCTGTATGAGGACCCCC AGATCAGAAAAACCTCACCCAGTGGCAAACCTGCCACACTCAAGATCTGCTCTTGGAATGT GGATGGGCTTCGAGCCTGGATTAAGAAGAAAGGATTAGATTGGGTAAAGGAAGAAGCCCC AGATATACTGTGCCTTCAAGAGACCAAATGTTAGAGAACAACTACCAGCTGAACCTCA GGAGCTGCCTGGACTCTCTCATCAATACTGGTCAGCTCCTTCGGACAAGGAAGGGTACAG TGGCGTGGCCTGCTTTCCCGCCAGTCCCACCTCAAAGTTTCTACGGCATAAGCGANG AGGAGCATGATCAGGAAGCCGGGTGATTGTGGCTGAATTTGACTCGTTTGTGCTGTTAA CACCATATGTACCTAATGCACGCCCGAGGTCTGGGTACAAGTGAAGTACCCGCCACGCT GGGATGAAGCCTTTCGAGATCCCTGAAGGGCCTGGCTTCCCAAAGCCACTTGTGCTGT GGGNAGACTCCATGTGGACCATTGAAGAAATGACCTCCCCACCCNCAGGGAACANAAGN AATGCTGCTTCACGCCCCAAGACCGCCACGCTTTTGGG</p>
3' Read Nucleotide Sequence:	<p>>OriGene 3' read for NM_001641 unedited</p> <p>ACCGCGCCGCAATCTAGAGTCGAGTTTTTTTTTTTTTTTTTTTTTAAACTATGGCTCTTT ATTTTCATGTGGATAATTCAAACAAAGTCATTAGTAGTCTTTGTTCAATTTTTTTTTTAAA AAACAAAAACCCCTCAAATAAAAAATCTTGGGCTTAAAAGAACTCTATCACAGGAGCCTG GTTGGAGGATTCCTAGTTTTATACATGAGAAATAGAATGCAGATTCTCTGAAGAGTGTT TAAAGAAGGAATGGTAGTTGAGGGGGCTTATTTCCAGGCTCAAAGTGATTTAGGGGTGG TGTACAGTGCTAGGTATAGGGTGATAGGACAGTGATCACTGCCGAGGGCCTTGGAACGG ATCTTGCTGTACACAATGCAGGTAACAGAGAGTGGGACAACAAAAAGTAATCAAGGCGC CAACCAACATTCTTGGATCGAGCATTATCATATAAGTCCAAAAGGTGTAGGCATAGGGT GTGTTGGGGTAGAAGTGCCTAAAGCTGTCAGCCAGTGGCACAGCCTGCAGTAATCCCCG AAGCCTTGGCGCTCTTGTGGCGTGAAGCCAGCATTCTTTTTGTTCCCTTTGGGGTTGCA AAGGTCAATTTCTTTCATGGGGCCACATTTGAGGTCTCCACACAGCACAAGGGGGCTTTT GGGGAAGCCACCGCCCTTCAAGGAACTGGCGAAAAGGCTTTATTCCCAACGCTTGGCCGG TCCTCAAATTCGTACCAAACCTGGGCCTGCATTAAGGACAATAGGCTGTTCCCCCCAC AACCGATTCAAATTCAGACCCCATCCCCGGGCCTCCTCGATAATGGCTCTTCTCCCCCT ATGCGGAAAAACCTTTGAGGGGGCCCTGGCGGGAAAACAAGCCCCACCCCACTGTTCCC TTTCTGGTCCAGAGGAATTGACCACCTCTGGAGAAG</p>
Restriction Sites:	NotI-NotI
ACCN:	NM_001641
Insert Size:	1540 bp
OTI Disclaimer:	Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
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:

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_001641.2](#), [NP_001632.2](#)

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

Gene Summary: The APEX gene encodes the major AP endonuclease in human cells. It encodes the APEX endonuclease, a DNA repair enzyme with apurinic/aprimidinic (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]

Transcript Variant: This variant (1) contains the full-length first exon and is the longest transcript. Sequence Note: This RefSeq record was created from transcript and genomic sequence data to make the sequence consistent with the reference genome assembly. The genomic coordinates used for the transcript record were based on transcript alignments.