

## Product datasheet for **RG200320**

### **APEX2 (NM\_014481) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	APEX2 (NM_014481) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	APEX2
Synonyms:	APE2; APEXL2; XTH2; ZGRF2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>RG200320 representing NM\_014481  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGTTGCGCGTGGTGTAGCTGGAACATCAATGGGATTCGGAGACCCCTGCAAGGGGTGCAAAATCAGGAAC  
 CCAGCAACTGTGCCGCCGTGGCCGTGGGGCGCATTGGACGAGCTGGATGCGGATATCGTCTGTCTCCA  
 GGAAACCAAAGTGACCAGGGATGCACTGACAGAGCCCTGGCTATCGTTGAGGGTTATAACTCCTATTTT  
 AGCTTCAGCCGCAACCGTAGCGCTATTCTGGTGTAGCCACCTTCTGTAAGGACAATGCTACCCAGTGG  
 CTGCTGAAGAAGGCCTGAGTGGCCTGTTGCCACCCAGAATGGGGATGTTGGTTGCTATGGAAACATGGA  
 TGAGTTTACCCAAGAGGAACTCCGGCTCTGGATAGTGGGGCAGGGCCCTCTCACACAGCATAAGATC  
 CGCACATGGGAAGGTAAGGAGAAGACCTTGACCCTAATCAACGTGTACTGCCCCATGCGGACCCCTGGGA  
 GGCCTGAGCGGCTAGTCTTTAAGATGCGCTTCTATCGTTTGTCAAATCCGAGCAGAAGCCCTCTGGC  
 GGCAGGCAGCCATGTGATCATTCTGGGTGACCTGAATACAGCCACCGCCCATGACCACTGGGATGCA  
 GTCAACCTGGAATGCTTTGAAGAGGACCCAGGGCGCAAGTGGATGGACAGCTTGCTCAGTAACTGGGGT  
 GCCAGTCTGCCTCTCATGTAGGGCCCTTATCGATAGCTACCGCTGCTTCCAACCAAAGCAGGAGGGGGC  
 CTTACCTGCTGGTCAGCAGTCACTGGCGCCCGCCATCTCAACTATGGCTCCCGGCTTGACTATGTGCTG  
 GGGGACAGGACCCCTGGTCATAGACACCTTTAGGCCTCTTTCCTGCTGCCTGAGGTGATGGGCTCTGACC  
 ACTGCCCTGTGGGTGCAGTCTTGAGTGTCTCTGTGCCTGCAAACAGTGCCACCTCTGTGCACCCG  
 CTTCTCCCTGAGTTTGCAGGCACCCAGCTCAAGATCCTTCGCTTCTAGTTCCTCTCGAACAAAGTCTCT  
 GTGTTGGAGCAGTCGACGCTGCAGCACAACAATCAAACCCGGGTACAGACATGCCAAAACAAAGCCCAAG  
 TGCCTCAACCAGGCCTCAGCCAGTCAGTTGGCTCTAGCAGAGGCCAGAAAAACCTGAAGAGCTACTT  
 TCAGCCCTCCCTAGCTGTCCCAAGCCTCTCCTGACATAGAGCTGCCTAGCCTACCACTGATGAGCGCC  
 CTCATGACCCCGAAGACTCCAGAAGAGAAGGCAGTGGCCAAAGTGGTGAAGGGGCAGGCCAAGACTTCAG  
 AAGCCAAAGATGAGAAGGAGTTACGGACCTCATTCTGGAAGTCTGTGCTGGCGGGGCCCTTGCGCACACC  
 CCTCTGTGGGGCCACAGGGAGCCATGTGTGATGCGTACTGTGAAGAAGCCAGGACCCAACTTGGGCCGC  
 CGCTTCTACATGTGTGCCAGGCCCGGGTCTCCCACTGACCCCTCTCCCGGTGCAACTTCTTCTCT  
 GGAGCAGGCCAGC

**ACGCGTACGCGGCCGCTCGAG** - GFP Tag - GTTTAA

**Protein Sequence:**

>RG200320 representing NM\_014481  
 Red=Cloning site Green=Tags(s)

MLRVVSWNINGIRRPLQGVANQEPSNCAAVAVGRILDELADIVCLQETKVTVDALTEPLAIVEGYSYF  
 SFSRNRSGYSGVATFCKDNATPVAAEGLSGLFATQNGDVGCYGNMDEFTQEELRALDSEGRALLTQHKI  
 RTWEGKEKTLTLINVYCPHADPGRPERLVFKMRFYRLLQIRAEALLAAGSHVIIIGDLNTAHRPIDHWDA  
 VNLECFEEDPGRKWMSLLSNLGCQSASHVGPFIIDSYRCFQPKQEGAFTCWSAVTGARHLNYGSRLDYVL  
 GDRTLVIDTFQASFLLEVMGSDHCPVGAVLSVSSVPAKQCPPLCTRFLPEFAGTQLKILRFLVPLEQSP  
 VLEQSTLQHNNQTRVQTCQNKAVRSTRPQPSQVGSRRGQKNLKSYPQSPSCPQASPDIELPSLPLMSA  
 LMPKTPPEEKAVAKVVKQAKTSEAKDEKELRTSFWKSVLGAPLRTPLCGGHREPCVMRTVKKPGPNLGR  
 RFYMCARPRGPPTDPSSRCNFFLWSRPS

**TRTRPLE** - GFP Tag - V

**Restriction Sites:**

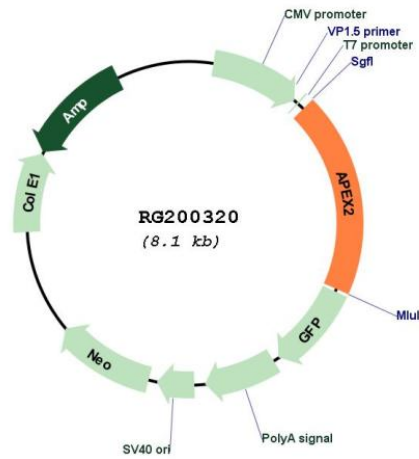
Sgfl-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shutting:



**Plasmid Map:**



<b>ACCN:</b>	NM_014481
<b>ORF Size:</b>	1554 bp
<b>OTI Disclaimer:</b>	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. <a href="#">More info</a>
<b>OTI Annotation:</b>	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>RefSeq:</b>	<a href="#">NM_014481.4</a>
<b>RefSeq Size:</b>	1991 bp
<b>RefSeq ORF:</b>	1557 bp
<b>Locus ID:</b>	27301
<b>UniProt ID:</b>	<a href="#">Q9UBZ4</a>
<b>Cytogenetics:</b>	Xp11.21
<b>Protein Families:</b>	Druggable Genome
<b>Protein Pathways:</b>	Base excision repair
<b>Gene Summary:</b>	Apurinic/aprimidinic (AP) sites occur frequently in DNA molecules by spontaneous hydrolysis, by DNA damaging agents or by DNA glycosylases that remove specific abnormal bases. AP sites are pre-mutagenic lesions that can prevent normal DNA replication so the cell contains systems to identify and repair such sites. Class II AP endonucleases cleave the phosphodiester backbone 5' to the AP site. This gene encodes a protein shown to have a weak class II AP endonuclease activity. Most of the encoded protein is located in the nucleus but some is also present in mitochondria. This protein may play an important role in both nuclear and mitochondrial base excision repair. Alternatively spliced transcript variants encoding multiple isoforms have been observed for this gene. [provided by RefSeq, Nov 2012]