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# Product datasheet for RG212252

## APAF1 (NM_001160) Human Tagged ORF Clone

### Product data:

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|---|---|
| **Product Type:** | Expression Plasmids |
| **Product Name:** | APAF1 (NM_001160) Human Tagged ORF Clone |
| **Tag:** | TurboGFP |
| **Symbol:** | APAF1 |
| **Synonyms:** | APAF-1; CED4 |
| **Mammalian Cell Selection:** | Neomycin |
| **Vector:** | pCMV6-AC-GFP (PS100010) |
| **E. coli Selection:** | Ampicillin (100 ug/mL) |

**ORF Nucleotide Sequence:**

>RG212252 representing NM_001160
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGGATGCAAAAGCTCGAAATTGTTTGCTTCAACATAGAGAAGCTCTGGAAAAGGACATCAAGACATCCT
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GCTTTAATGTTTTCCCTGGATTGGATTAAAGCAAAAACAGAACTTGTAGGCCCTGCTCATCTGATTCATG
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GAAAATACACGTGTCCCCTGACTTCAAAACATATGTGACTGTGGATAATCTTGGTATTTTATATATTTTA
CAGACTTTAGAA

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

**Protein Sequence:**

>RG212252 representing NM_001160
Red=Cloning site Green=Tags(s)

MDAKARNCLLQHREALEKDIKTSYIMDHMISDGFLTISEEEKVRNEPTQQQRAAMLIKMILKKDNDSYVS
FYNALLHEGYKDLAALLHDGIPVVSSSSVRTVLCEGGVPQRPVVFVTRKKLVNAIQQKLSKLKGEPGWVT
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THGGWVTDLCFSPDGKMLISAGGYIKWWNVVTGESSQTFYTNGTNLKKIHVSPDFKTYVTVDNLGILYIL
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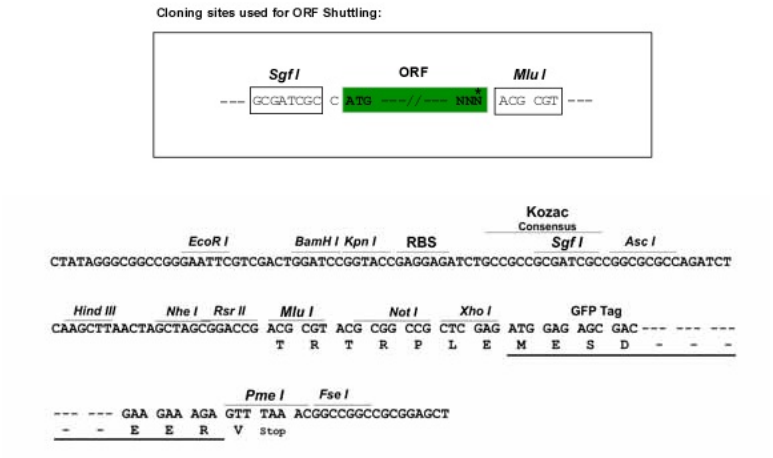
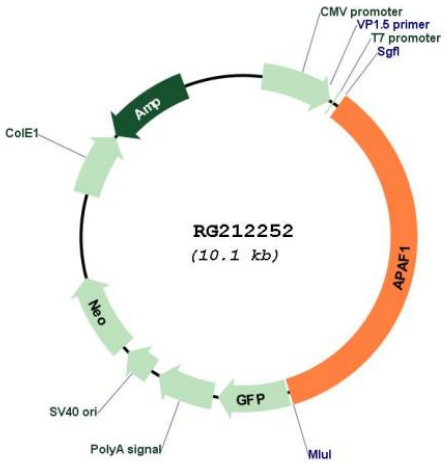
TRTRPLE – GFP Tag – V

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



Plasmid Map:

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|---|---|
| **ACCN:** | NM_001160 |
| **ORF Size:** | 3582 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:** | 1. Centrifuge at 5,000xg for 5min.<br>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.<br>3. Close the tube and incubate for 10 minutes at room temperature.<br>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.<br>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_001160.3 |
| **RefSeq Size:** | 7042 bp |
| **RefSeq ORF:** | 3585 bp |
| **Locus ID:** | 317 |
| **UniProt ID:** | O14727 |
| **Cytogenetics:** | 12q23.1 |

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|---|---|
| **Domains:** | CARD, WD40, NB-ARC |
| **Protein Families:** | Druggable Genome |
| **Protein Pathways:** | Alzheimer's disease, Amyotrophic lateral sclerosis (ALS), Apoptosis, Huntington's disease, p53 signaling pathway, Parkinson's disease, Small cell lung cancer |
| **Gene Summary:** | This gene encodes a cytoplasmic protein that initiates apoptosis. This protein contains several copies of the WD-40 domain, a caspase recruitment domain (CARD), and an ATPase domain (NB-ARC). Upon binding cytochrome c and dATP, this protein forms an oligomeric apoptosome. The apoptosome binds and cleaves caspase 9 preproprotein, releasing its mature, activated form. Activated caspase 9 stimulates the subsequent caspase cascade that commits the cell to apoptosis. Alternative splicing results in several transcript variants encoding different isoforms. [provided by RefSeq, Jul 2008] |