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Product datasheet for RC213433

APAF1 (NM_181869) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	APAF1 (NM_181869) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	APAF1
Synonyms:	APAF-1; CED4
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)

ORF Nucleotide Sequence:

>RC213433 representing NM_181869
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGGATGCAAAAGCTCGAAATTGTTTGCTTCAACATAGAGAAGCTCTGGAAAAGGACATCAAGACATCCT
ACATCATGGATCACATGATTAGTGATGGATTTTTAACAATATCAGAAGAGGAAAAAGTAAGAAATGAGCC
CACTCAACAGCAAAGAGCAGCTATGCTGATTAAAATGATACTTAAAAAAGATAATGATTCCTACGTATCA
TTCTACAATGCTCTACTACATGAAGGATATAAAGATCTTGCTGCCCTTCTCCATGATGGCATTCCTGTTG
TCTCTTCTTCCAGTGGTAAAGATTCAGTTAGTGGAATAACTTCGTATGTAAGGACAGTCCTGTGTGAAGG
TGGAGTACCACAGAGGCCAGTTGTTTTTGTCACAAGGAAGAAGCTGGTGAATGCAATTCAGCAGAAGCTC
TCCAAATTGAAAGGTGAACCAGGATGGGTCACCATACATGGAATGGCAGGCTGTGGGAAGTCTGTATTAG
CTGCAGAAGCTGTTAGAGATCATTCCCTTTTAGAAGGTTGTTTCCCAGGGGGAGTGCATTGGGTTTCAGT
TGGGAAACAAGACAAATCTGGGCTTCTGATGAAACTGCAGAATCTTTGCACACGGTTGGATCAGGATGAG
AGTTTTTCCCAGAGGCTTCCACTTAATATTGAAGAGGCTAAAGACCGTCTCCGCATTCTGATGCTTCGCA
AACACCCAAGGTCTCTCTTGATCTTGGATGATGTTTGGGACTCTTGGGTGTTGAAAGCTTTTGACAGTCA
GTGTCAGATTCTTCTTACAACCAGAGACAAGAGTGTTACAGATTCAGTAATGGGTCCTAAATATGTAGTC
CCTGTGGAGAGTTCCTTAGGAAAGGAAAAAGGACTTGAAATTTTATCCCTTTTTGTTAATATGAAGAAGG
CAGATTTGCCAGAACAAGCTCATAGTATTATAAAAGAATGTAAAGTGGTGGAACGTTGTCACTGGGGAAT
CCTCACAGACCTTCTACACAAATGGAACCAATCT

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

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Protein Sequence:

>RC213433 representing NM_181869
Red=Cloning site Green=Tags(s)

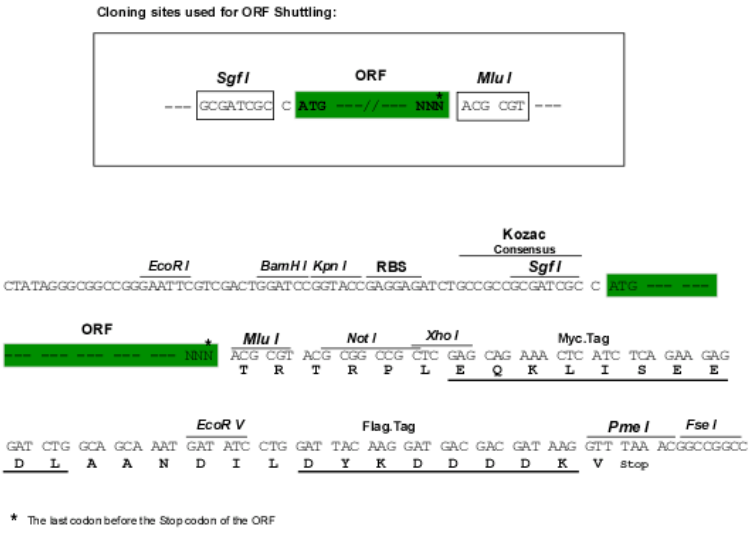
MDAKARNCLLQHREALEKDIKTSYIMDHMISDGFLTISEEEKVRNEPTQQQRAAMLIKMILKKDNDSYVS
FYNALLHEGYKDLAALLHDGIPVVSSSSGKDSVSGITSYVRTVLCEGGVPQRPVVFVTRKKLVNAIQQKL
SKLKGEPGWVTIHGMAGCGKSVLAAEAVRDHSLLEGCFPGGVHWVSVGKQDKSGLLMKLQNLCTRLDQDE
SFSQRLPLNIEEAKDRLRILMLRKHPRSLLILDDVWDSWVLKAFDSQCQILLTTRDKSVTDSVMGPKYVV
PVESSLGKEKGLEILSLFVNMKKADLPEQAHSIIKECKVVERCHWGILTDLLHKWNQS

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mg8004_a03.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_181869

ORF Size: 1014 bp

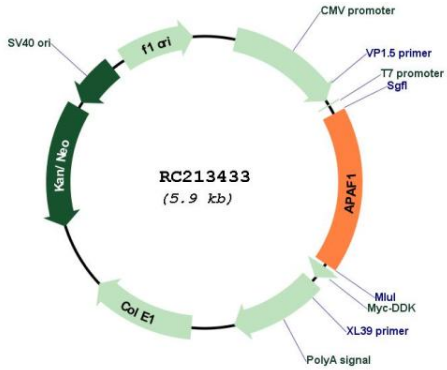
OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially 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.

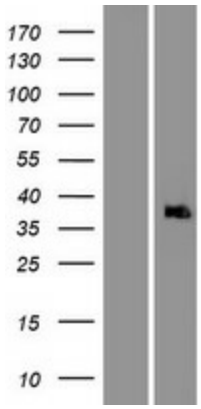
Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

Reconstitution Method:	1. Centrifuge at 5,000xg for 5min. 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.
Note:	Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.
RefSeq:	NM_181869.1, NP_863659.1
RefSeq Size:	4559 bp
RefSeq ORF:	1017 bp
Locus ID:	317
UniProt ID:	O14727
Cytogenetics:	12q23.1
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
MW:	37.8 kDa
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]

Product images:



Circular map for RC213433



Western blot validation of overexpression lysate (Cat# [LY405563]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from un-transfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC213433 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).