

Product datasheet for RR213145

Pdcd6 (NM_001107452) Rat Tagged ORF Clone

Product data:

Product Type: Expression Plasmids
Product Name: Pdcd6 (NM_001107452) Rat Tagged ORF Clone
Tag: Myc-DDK
Symbol: Pdcd6
Synonyms: ALG-2
Vector: pCMV6-Entry (PS100001)
E. coli Selection: Kanamycin (25 ug/mL)
Cell Selection: Neomycin
ORF Nucleotide Sequence: >RR213145 representing NM_001107452
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCCGCGATCGCC

ATGGCTGCCTACTCTACCGCCCAGGCCAGGTGCTGGCCCTGGCCCTGCTGCTGGAGTGCCTGCCAG
 ACCAGAGCTTCTGTGGAACGTCTCCAGCGGGTTGATAAAGACAGGAGCGGAGTGATTCAGACAATGA
 ACTTCAGCAAGCATTATCCAATGGTACATGGACTCCGTTTAATCCAGTACTGTGAGGTCAATCATTCT
 ATGTTTGACCGAGAAAACAAGGCTGGTGTGAATTCAGTGAATTCACAGGTGTGTGGAAGTATATCACAG
 ACTGGCAGAATGTCTCCGGACCTACGACAGGGACAACCTCTGGGATGATTGACAAGCATGAGCTCAAACA
 AGCACTCTCAGGTTTTGGCTACCGGCTCTCTGATCAGTCCATGACATCCTCATCCGAAAATTTGACAGG
 CAAGGACGAGGGCAGATCGCGTTCGATGACTTCATCCAGGGTGCATCGTCTTGCAGAGGTTGACAGACA
 TATTCAGACGCTATGACACGGATCAGGATGGCTGGATTGAGGTGTCTTACGAGCAGTATCTCCATGGT
 TTCAGCATTGTA

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >RR213145 representing NM_001107452
 Red=Cloning site Green=Tags(s)

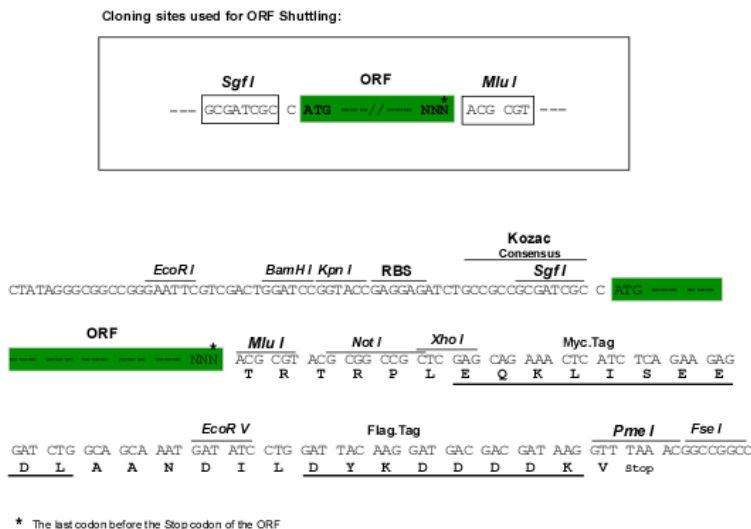
MAAYSYRPGPGAGPGAAGAALPDQSFLWNVFRVDRSGVSDNELQQALSNGTWTWPFNPVTVRSIIS
 MFDRENKAGVNFSEFTGVWKYITDWQNVFRTYDRDMSGMIDKHELKQALSGFGYRLSDQFHDILIRKFDR
 QGRGQIAFDDFIQGCIVLQRLTDIFRRYDQDQGWIQVSYEQYLSMVFSIV

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

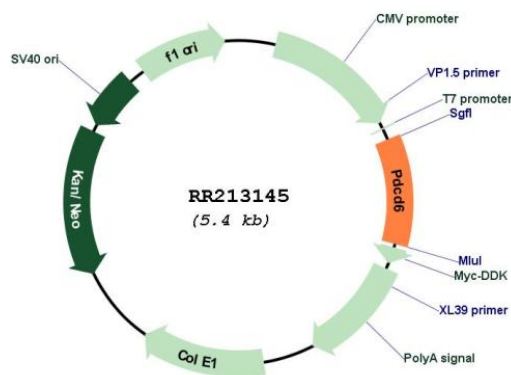
Restriction Sites: SgfI-MluI



Cloning Scheme:



Plasmid Map:



ACCN: NM_001107452

ORF Size: 573 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.

RefSeq: [NM_001107452.1](#), [NP_001100922.1](#)

RefSeq Size: 1531 bp

RefSeq ORF: 576 bp

Locus ID: 308061

UniProt ID: [G3V7W1](#)

Cytogenetics: 1p11

MW: 21.9 kDa

Gene Summary: Calcium sensor that plays a key role in processes such as endoplasmic reticulum (ER)-Golgi vesicular transport, endosomal biogenesis or membrane repair (By similarity). Acts as an adapter that bridges unrelated proteins or stabilizes weak protein-protein complexes in response to calcium: calcium-binding triggers exposure of apolar surface, promoting interaction with different sets of proteins thanks to 3 different hydrophobic pockets, leading to translocation to membranes (By similarity). Involved in ER-Golgi transport (PubMed:27276012). Regulates ER-Golgi transport by promoting the association between PDCD6IP and TSG101, thereby bridging together the ESCRT-III and ESCRT-I complexes (By similarity). Together with PEF1, acts as calcium-dependent adapter for the BCR(KLHL12) complex, a complex involved in ER-Golgi transport by regulating the size of COPII coats (By similarity). In response to cytosolic calcium increase, the heterodimer formed with PEF1 interacts with, and bridges together the BCR(KLHL12) complex and SEC31 (SEC31A or SEC31B), promoting monoubiquitination of SEC31 and subsequent collagen export, which is required for neural crest specification (By similarity). Involved in the regulation of the distribution and function of MCOLN1 in the endosomal pathway (By similarity). Promotes localization and polymerization of TFG at endoplasmic reticulum exit site (By similarity). Required for T-cell receptor-, Fas-, and glucocorticoid-induced apoptosis (By similarity). May mediate Ca(2+)-regulated signals along the death pathway: interaction with DAPK1 can accelerate apoptotic cell death by increasing caspase-3 activity (By similarity). Its role in apoptosis may however be indirect, as suggested by knockout experiments (By similarity). May inhibit KDR/VEGFR2-dependent angiogenesis; the function involves inhibition of VEGF-induced phosphorylation of the Akt signaling pathway (By similarity).[UniProtKB/Swiss-Prot Function]