

Product datasheet for RC212051

PAX2 (NM_003987) Human Tagged ORF Clone

Product data:

Product Type: Expression Plasmids
Product Name: PAX2 (NM_003987) Human Tagged ORF Clone
Tag: Myc-DDK
Symbol: PAX2
Synonyms: FSGS7; PAPRS
Mammalian Cell Selection: Neomycin
Vector: pCMV6-Entry (PS100001)
E. coli Selection: Kanamycin (25 ug/mL)
ORF Nucleotide Sequence: >RC212051 representing NM_003987
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGATCGCC**

ATGGATGCACTGCAAAGCAGACCCCTTCTCCGCGATGCACCCAGGGCACGGGGGTGTGAACCAGCTCG
 GGGGGGTGTTGTGAACGGCCGGCCCTACCCGACGTGGTGAGGCAGCGCATCGTGGAGCTGGCCACCA
 GGGTGTGCGGCCCTGTGACATCTCCCGCAGCTGCGGGTCAAGCCAGGCTGTGTGACAAAATCCTGGC
 AGGTACTACGAGACCGGCAGCATCAAGCCGGGTGTGATCGGTGGTCCAAGCCAAAGTGGCGACGCCA
 AAGTGGTGGACAAGATTGCTGAATACAAACGACAGAACCAGACTATGTTCCGCTGGGAGATTCGAGACCG
 GCTCCTGGCCGAGGGCATCTGTGACAATGACACAGTGCCAGCGTCTTCCATCAACAGAATCATCCGG
 ACCAAAGTTCAGCAGCCTTTCCACCCAACGCCGATGGGGCTGGGACAGGAGTGACCGCCCTGGCCACA
 CCATTGTTCCAGCAGCGCTCCCTCCTGTTCCAGCGCTCCAATGACCCAGTGGGATCCTACTCCAT
 CAATGGGATCCTGGGATTCCTCGCTCCAATGGTGAAGAGGAAACGTGATGAAGTTGAGGTATACACT
 GATCCTGCCACATTAGAGGAGGTGGAGTTTGCATCTGGTCTGGACTTTAAGAGATGTGTCTGAGGGCT
 CAGTCCCCAATGGAGATCCCAGAGTGGTGTGGACAGTTTGCAGGAACTTGGCAGCTGACACCTTAC
 CCAGCAGCAGCTGGAAGCTTTGGATCGGGTCTTTGAGCGTCTTCCCTACCCTGACGTCTTCCAGGCATCA
 GAGCAGATCAAAATCAGAACAGGGGAACGAGTACTCCCTCCAGCCCTGACCCCTGGGCTTGATGAAGTCA
 AGTCGAGTCTATCTGCATCCACCAACCCTGAGCTGGGCAGCAACGTGTGAGGCACACAGACATACCCAGT
 TGTGACTGGTCTGACATGGCGAGCACCCTCTGCCTGTTACCCCTCACGTGCCCCCACTGGCCAG
 GGAAGCTACCCACCTCCACCCTGGCAGGAATGGTGCCTGGGAGCGAGTTCTCCGCAACCCGTACAGCC
 ACCCCAGTACACGGCTACAACGAGGCTTGAGATTAGCAACCCCGCCTTACTAAGTTCCCTTATTA
 TTATAGTGCCGCCCCCGGTCCGCCCTGCCGCTGCTGCCGCTGCCTATGACCGCCAC

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA



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Protein Sequence: >RC212051 representing NM_003987
 Red=Cloning site Green=Tags(s)

MDMHCKADPF SAMHPGHGGVNLGGVFVNGRPLPDVVQRIVELAHQGVRPCDISRQLRVSHGCVSKILG
 RYYETGSIKPGVIGGSKPKVATPKVVDKIAEYKRQNPMTFAWEIRDRLAEGICDNTPSVSSINRIIR
 TKVQQPFHPTPDGAGTGTAPGHTIVPSTASPPVSSASNDPVGSYSINGILGIPRSNGEKRRDEVEVYT
 DPAHIRGGGGLHLVWTLRDVSEGSVPNGDSQSGVDLRKHLRADTFTQQLEALDRVFERPSYDPVFQAS
 EHIKSEQNEYSLPALTPGLDEVKSSLSASTNPELGSNVSGTQTYPVVTGRDMASSTLPGYPPHPPTGQ
 GSYPTSTLAGMVPGESESGNPPYSHPQYAYNEAWRFSNPALLSSPYYSAPRSAPAAAAAYDRH

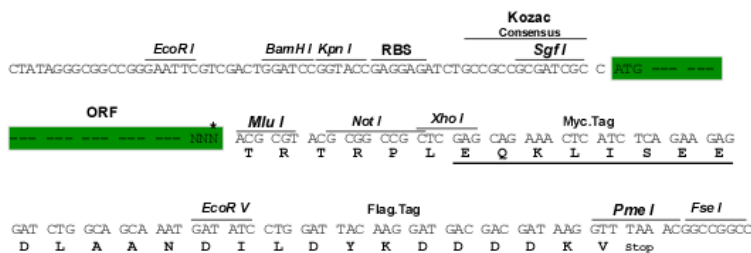
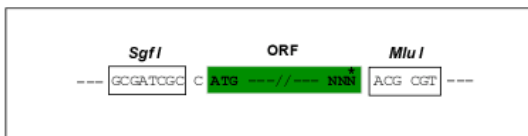
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6705_e02.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



* The last codon before the Stop codon of the ORF

ACCN: NM_003987

ORF Size: 1248 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_003987.3](#)

RefSeq Size: 4276 bp

RefSeq ORF: 1254 bp

Locus ID: 5076

UniProt ID: [Q02962](#)

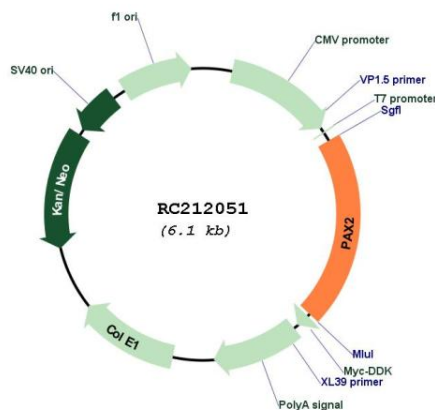
Cytogenetics: 10q24.31

Protein Families: Druggable Genome

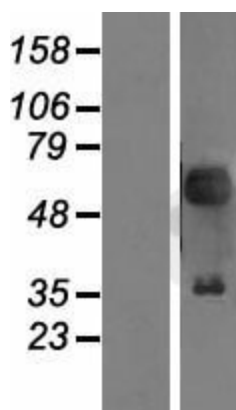
MW: 44.5 kDa

Gene Summary: PAX2 encodes paired box gene 2, one of many human homologues of the *Drosophila melanogaster* gene *prd*. The central feature of this transcription factor gene family is the conserved DNA-binding paired box domain. PAX2 is believed to be a target of transcriptional suppression by the tumor suppressor gene WT1. Mutations within PAX2 have been shown to result in optic nerve colobomas and renal hypoplasia. Alternative splicing of this gene results in multiple transcript variants. [provided by RefSeq, Dec 2014]

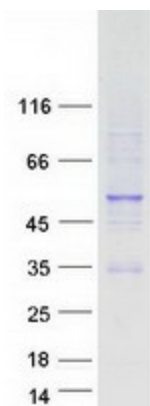
Product images:



Circular map for RC212051



Western blot validation of overexpression lysate (Cat# [LY418300]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC212051 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified PAX2 protein (Cat# [TP312051]). The protein was produced from HEK293T cells transfected with PAX2 cDNA clone (Cat# RC212051) using MegaTran 2.0 (Cat# [TT210002]).