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# Product datasheet for RC204179

## PITX2 (NM_000325) Human Tagged ORF Clone

### Product data:

| | |
|---|---|
| **Product Type:** | Expression Plasmids |
| **Product Name:** | PITX2 (NM_000325) Human Tagged ORF Clone |
| **Tag:** | Myc-DDK |
| **Symbol:** | PITX2 |
| **Synonyms:** | ARP1; ASGD4; Brx1; IDG2; IGDS; IGDS2; IHG2; IRID2; Otlx2; PTX2; RGS; RIEG; RIEG1; RS |
| **Mammalian Cell Selection:** | Neomycin |
| **Vector:** | pCMV6-Entry (PS100001) |
| **E. coli Selection:** | Kanamycin (25 ug/mL) |

**ORF Nucleotide Sequence:**

>RC204179 ORF sequence
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGAACTGCATGAAAGGCCCGCTTCACTTGGAGCACCGAGCAGCGGGGACCAAGCTGTCGGCCGTCTCCT
CATCTTCCTGTCACCATCCCCAGCCGTTAGCCATGGCTTCGGTTCTGGCTCCCGGTCAGCCCCGGTCGCT
GGACTCCTCCAAGCACAGGCTGGAGGTGCACACCATCTCCGACACCTCCAGCCCGGAGGCCGCAGAGAAA
GATAAAAGCCAGCAGGGGAAGAATGAGGACGTGGGCGCCGAGGACCCGTCTAAGAAGAAGCGGCAAAGGC
GGCAGCGGACTCACTTTACCAGCCAGCAGCTCCAGGAGCTGGAGGCCACTTTCCAGAGGAACCGCTACCC
GGACATGTCCACACGCGAAGAAATCGCTGTGTGGACCAACCTTACGGAAGCCCGAGTCCGGGTTTGGTTC
AAGAATCGTCGGGCCAAATGGAGAAAGAGGGAGCGCAACCAGCAGGCCGAGCTATGCAAGAATGGCTTCG
GGCCGCAGTTCAATGGGCTCATGCAGCCCTACGACGACATGTACCCAGGCTATTCCTACAACAACTGGGC
CGCCAAGGGCCTTACATCCGCCTCCCTATCCACCAAGAGCTTCCCCTTCTTCAACTCTATGAACGTCAAC
CCCCTGTCATCACAGAGCATGTTTTCCCCACCCAACTCTATCTCGTCCATGAGCATGTCGTCCAGCATGG
TGCCCTCAGCAGTGACAGGCGTCCCGGGCTCCAGTCTCAACAGCCTGAATAACTTGAACAACCTGAGTAG
CCCGTCGCTGAATTCCGCGGTGCCGACGCCTGCCTGTCCTTACGCGCCGCCGACTCCTCCGTATGTTTAT
AGGGACACGTGTAACTCGAGCCTGGCCAGCCTGAGACTGAAAGCAAAGCAGCACTCCAGCTTCGGCTACG
CCAGCGTGCAGAACCCGGCCTCCAACCTGAGTGCTTGCCAGTATGCAGTGGACCGGCCCGTG

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

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**Protein Sequence:**

>RC204179 protein sequence
Red=Cloning site Green=Tags(s)

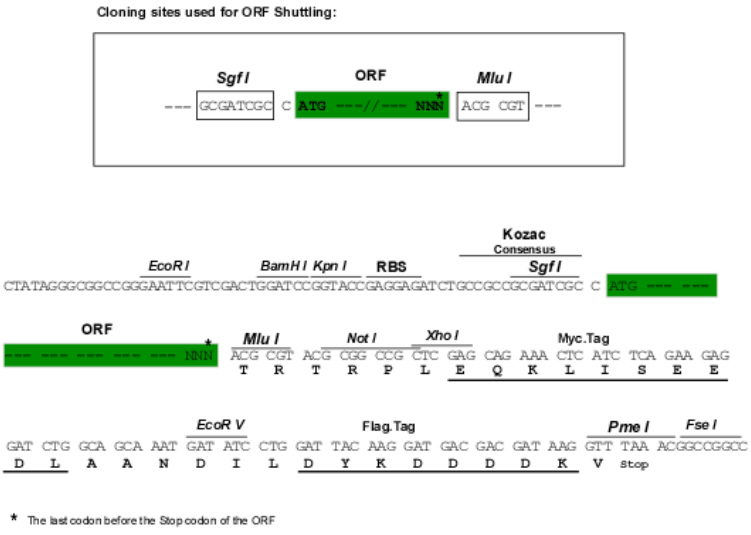
MNCMKGPLHLEHRAAGTKLSAVSSSSCHHPQPLAMASVLAPGQPRSLDSSKHRLEVHTISDTSSPEAAEK
DKSQQGKNEDVGAEDPSKKKRQRRQRTHFTSQQLQELEATFQRNRYPDMSTREEIAVWTNLTEARVRVWF
KNRRAKWRKRERNQQAELCKNGFGPQFNGLMQPYDDMYPGYSYNNWAAKGLTSASLSTKSFPFFNSMNVN
PLSSQSMFSPPNSISSMSMSSSMVPSAVTGVPGSSLNSLNNLNNLSSPSLNSAVPTPACPYAPPTPPYVY
RDTCNSSLASLRLKAKQHSSFGYASVQNPASNLSACQYAVDRPV

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** https://cdn.origene.com/chromatograms/mk6171_f01.zip

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**




**ACCN:** NM_000325

**ORF Size:** 972 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).

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| **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_000325.6 |
| **RefSeq Size:** | 2337 bp |
| **RefSeq ORF:** | 975 bp |
| **Locus ID:** | 5308 |
| **UniProt ID:** | Q99697 |
| **Cytogenetics:** | 4q25 |
| **Domains:** | homeobox, OAR |
| **Protein Families:** | Transcription Factors |
| **Protein Pathways:** | TGF-beta signaling pathway |
| **MW:** | 35.8 kDa |
| **Gene Summary:** | This gene encodes a member of the RIEG/PITX homeobox family, which is in the bicoid class of homeodomain proteins. The encoded protein acts as a transcription factor and regulates procollagen lysyl hydroxylase gene expression. This protein plays a role in the terminal differentiation of somatotroph and lactotroph cell phenotypes, is involved in the development of the eye, tooth and abdominal organs, and acts as a transcriptional regulator involved in basal and hormone-regulated activity of prolactin. Mutations in this gene are associated with Axenfeld-Rieger syndrome, iridogoniodysgenesis syndrome, and sporadic cases of Peters anomaly. A similar protein in other vertebrates is involved in the determination of left-right asymmetry during development. Alternatively spliced transcript variants encoding distinct isoforms have been described. [provided by RefSeq, Jul 2008] |

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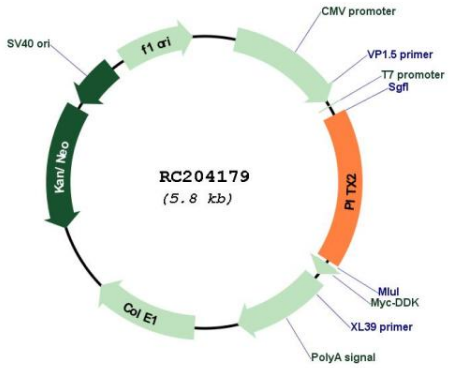
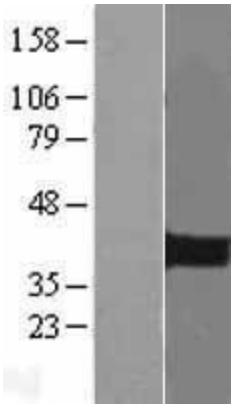
## Product images:




Circular map for RC204179




Western blot validation of overexpression lysate (Cat# [LY400123]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from un-transfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC204179 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).

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