

## Product datasheet for RC213218

### PITX2 (NM\_153426) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	PITX2 (NM_153426) 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:	>RC213218 representing NM_153426 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGGAGACCAACTGCCGCAAAGTGGTGTGCGCGTGTGTGCAATTAGGCGTGCAGCCGGCGCGTGAAT  
GTCTCTTCTCAAAGACTCCGAAATCAAAAAGGTCGAGTTCACGGACTCTCCTGAGAGCCGAAAAGAGGC  
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TTTTCCCACCAACTCTATCTCGTCCATGAGCATGTCGTCAGCATGGTGCCTCAGCAGTGACAGGCG  
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CTGGCCAGCCTGAGACTGAAAGCAAAGCAGCACTCCAGCTTCGGCTACGCCAGCGTGCAGAACCCGGCCT  
CCAACCTGAGTGCTTGCCAGTATGCAGTGGACCGCCCGT

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA



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**Protein Sequence:** >RC213218 representing NM\_153426  
Red=Cloning site Green=Tags(s)

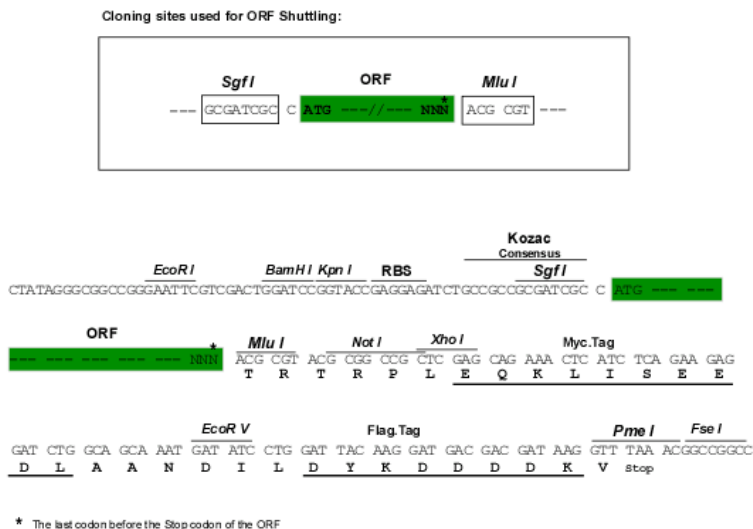
METNCRKLVSA CVQLGVQPA AVECLF SKDSEIKKVEFTDSPE SRKEAASSKFFPRQH PGANEKDKSQQGK  
 NEDVGAEDPSKKKRQRRTHTF TSQQLQELEATFQRNRY PDMSTREEIAVW TNLTEARVRVWFKNRR AKW  
 RKRERNQQAELCKNGFGPQFNGLMQPYDDMYPGYSYNNWAAKGLTSASLSTKSF PFFNSMNVNPLSSQSM  
 FSPPNSISSMSMSSMVP SVAVTGVP GSSLNLSLNNLSSPSLNSAVPTPACPYAPPTPPYVYRDTCNSS  
 LASLRLKAKQHSSFGYASVQNPASNLSACQYAVDRPV

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mg2787\\_c05.zip](https://cdn.origene.com/chromatograms/mg2787_c05.zip)

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_153426

**ORF Size:** 951 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\\_153426.2](#)

**RefSeq Size:** 2250 bp

**RefSeq ORF:** 954 bp

**Locus ID:** 5308

**UniProt ID:** [Q99697](#)

**Cytogenetics:** 4q25

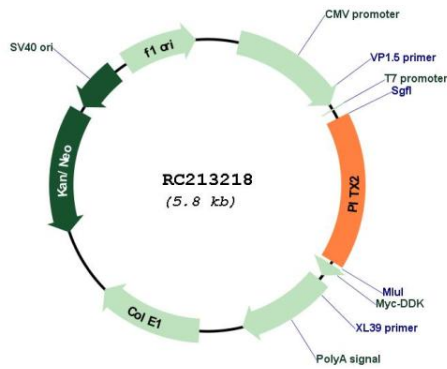
**Protein Families:** Transcription Factors

**Protein Pathways:** TGF-beta signaling pathway

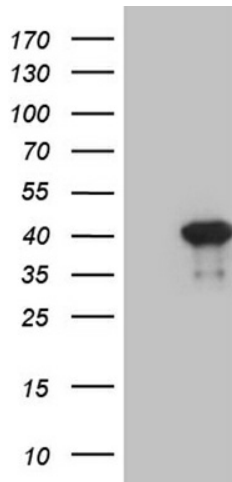
**MW:** 35.2 kDa

**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]

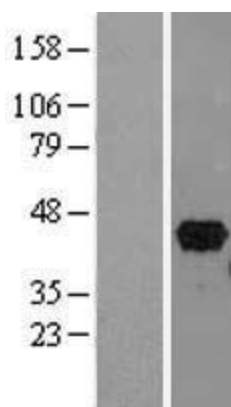
Product images:



Circular map for RC213218



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY PITX2 (Cat# RC213218, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-PITX2 (Cat# [TA809670])(1:2000). Positive lysates [LY407091] (100ug) and [LC407091] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY407091]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC213218 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).