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Product datasheet for SC111661

OTX2 (NM_021728) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	OTX2 (NM_021728) Human Untagged Clone
Tag:	Tag Free
Symbol:	OTX2
Synonyms:	CPHD6; MCOPS5
Mammalian Cell Selection:	None
Vector:	pCMV6-XL5
E. coli Selection:	Ampicillin (100 ug/mL)

View online »

Fully Sequenced ORF:

GCCCTCACTCGCCACATCTACTTTGATAGCTGGCTATTTGGAATTTAAAGGATATTTGACTTTTTCTAAC
CTCCCATGAGGCTGTAAGTTCCACTGCTCCAAACCCACCCACCAAGGACTCTGAACCTGTCCACCCCGGG
CGCATCAAGATCTTCCAGCTGGGTACCCCCGATTTGGGCCGACTTTGCACCTCCAAACAACCTTAGCATG
ATGTCTTATCTTAAGCAACCGCCTTACGCAGTCAATGGGCTGAGTCTGACCACTTCGGGTATGGACTTGC
TGCACCCCTCCGTGGGCTACCCGGGGCCCTGGGCTTCTTGTCCCGCAGCCACCCCCCGGAAACAGCGCCG
GGAGAGGACGACGTTCACTCGGGCGCAGCTAGATGTGCTGGAAGCACTGTTTGCCAAGACCCGGTACCCA
GACATCTTCATGCGAGAGGAGGTGGCACTGAAAATCAACTTGCCCGAGTCGAGGGTGCAGGTATGGTTTA
AGAATCGAAGAGCTAAGTGCCGCCAACAACAGCAACAACAGCAGAATGGAGGTCAAAACAAAGTGAGACC
TGCCAAAAAGAAGACATCTCCAGCTCGGGAAGTGAGTTCAGAGAGTGGAACAAGTGGCCAATTCACTCCC
CCCTCTAGCACCTCAGTCCCGACCATTGCCAGCAGCAGTGCTCCTGTGTCTATCTGGAGCCCAGCTTCCA
TCTCCCCACTGTCAGATCCCTTGTCCACCTCCTCTTCCTGCATGCAGAGGTCCTATCCCATGACCTATAC
TCAGGCTTCAGGTTATAGTCAAGGATATGCTGGCTCAACTTCCTACTTTGGGGGCATGGACTGTGGATCA
TATTTGACCCCTATGCATCACCAGCTTCCCGGACCAGGGGCCACACTCAGTCCCATGGGTACCAATGCAG
TCACCAGCCATCTCAATCAGTCCCCAGCTTCTCTTTCCACCCAGGGATATGGAGCTTCAAGCTTGGGTTT
TAACTCAACCACTGATTGCTTGGATTATAAGGACCAAACTGCCTCCTGGAAGCTTAACTTCAATGCTGAC
TGCTTGGATTATAAAGATCAGACATCCTCGTGGAAATTCCAGGTTTTGTGAAGACCTGTAGAACCTCTTT
TTGTGGGTGATTTTTAAATATACTGGGCTGGACATTCCAGTTTTAGCCAGGCATTGGTTAAAAGAGTTAG
ATGGGATGATGCTCAGACTCATCTGATCAAAGTTCCGAGAGGCATAGAAGGAAAAACGAAGGGCCTTAGA
GGGGCCTACAAACCAGCAACATGAAATGGACAAACCAATCTGCTTAAGATCCTGTCATAGTTTTAGATCA
TTGGTTATCCTGATTTGCAAAGTGATCAAAAGCATTCTAGCCATGTGCAACCAAACACCACCAAAAATAA
AATCAAACAAAACTAAGTTGTGAAGGAAGGGAGGGAAGGTCATAGCCTTCTTAAGCAGAGGTGTTCCATT
GTTTTAGCCAATCCTTGGTTGAATCTTAGGAATGAACAGTGTCTCAAGCTCATTCACGTTTCATGACCAA
CTGGTAGTTGGCACTGAAAAAACTTTTCAGGGCTGTGTGAATTGTGTGACTGATTGTCCTAGATGCACTA
CTTTATTTAAAAAATAATGTTCATAAGGAGTCAATATGTAGTTTAAGAGACAATCAGTGTGTGTCTTATA
AATGGTACATCTGTGGTTTTTAATCTGTGCTAGACTTCAAAACTGTGATCTCCTGTTATTGTATGCAACC
TTGAACTCCACCTCTGCAGGGGTTCTTCTGTGATTAAATAGGTTATAATTATAAGCAAAATTCAGAGCAA
CTGAGTACTGATCTAAAAAGATTACCTTTGGCTGGAGGTGAGCTGCACTGAAACTTTACGACAAAATGTC
TCTGGMCAAAGAGAGTCAGAGAAGAGAAGCAAAAGGACACTAATTCATCTGTAATTTACTGTTGGTAAGC
CTAGCAGTAAAGAGACATTGGTCAATTGCTCTGACCCTGATGAATTATTAAACTGAGATCATTGTCGTTT
ATGCTTGCAGATGTTAAATGGAAAAGTTATATATGCATAAACCTTTTCTTCCTGGATTTGGCAGATATGT
ATAATTATATTAAAATGGTTCTAGCACAAAAAAAAAAAAAAAAAAAAAAAAAA

5' Read Nucleotide Sequence:

>OriGene 5' read for NM_021728 unedited
CCTCGNGATTTTGTAAACCGNACTTACTGATAGGGCGGACCGCCCAATTCGCACGAGGGC
CCTCACTTTCCACATCTACTTTGATAGCTGGCTATTTGGAATTTAAAGGATATTTGACTT
TTTCTAACCTCCCATGAGGCTGTAAGTTCCACTGCTCCAAACCCACCCACCAAGGACTCT
GAACCTGTCCACCCCGGGCGCATCAAGATCTTCCAGCTTTTTTCCCCCGATTTGGGCCGA
CTTTGCACCTCCAAACAACCTTAGCATGATGTCTTATCTTAAGCAACCGCCTTACGCAGT
CAATGGGCTGAGTCTGACCACTTCGGGTATGGACTTGCTGCACCCCTCCGTGGGCTACCC
GGGGCCCTGGGCTTCTTGTCCCGCAGCCACCCCCCGGAAACAGCGCCGGGAGAGGACGAC
GTTCACTCGGGCGCAGCTAGATGTGCTGGAAGCACTGTTTGCCAAGACCCGGTACCCAGA
CATCTTCATGCGAGAGGAGGTGGCACTGAAAATCAACTTGCCCGAGTCGAGGGTGCAGGT
ATGGTTTAAGAATCGAAGAGCTAAGTGCCGCCAACAACAGCAACAACAGCAGAATGGAGG
TCAAAACAAAGTGAGACCTGCCAAAAAGAAGACATCTCCAGCTCGGGAAGTGAGTTCAGA
GAGTGGAACAAGTGGCCAATTCACTCCCCCCTCTAGCACCTCAGTCCCGACCATTGCCAG
CAGCAGTGCTCCTGTGTCTATCTGGAGCCCAGCTTCCATCTCCCCACTGTCAGATCCCTT
GTCCACCTCCTCTTCCTGCATGCAGAGGTCCTATCCCATGACCTATACTCANGCTTCANG
TTATAGTCAAGGATATGCTGGCTCAACTTTCTACTTTGNGGCATGGACTGTGNATCATAT
TTGACCCCTATGCT

3' Read Nucleotide Sequence:

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>OriGene 3' read for NM_021728 unedited
NGGTACAGATATGNNACCGCGGCCGCATNCNAGNGATCGGTTTTTTTTTTTTTTTTTTTT
TTTTTTTGGGCTAGAACCATTTTAATATAATTATACATATCTGCCAAATCCAGGAAAAAA
AGTTTATGCATATATAACTTTTCCATTTAACATCTGCAAGCATAAACGACAATGATCTCA
GTTTAATAATTCATCAGGGTCAGAGCAATTGACCAATGTCTCTTTACTGCTAGGCTTACC
AACAGTAAATTACAGATGAATTAGTGTCCTTTTGCTTCTCTTCTCTGACTCTCTTTGTCC
AGAGACATTTTGTCGTAAAGTTTCAGTGCAGCTCACCTCCAGCCAAAGGTAATCTTTTTA
GATCAGTACTCAGTTGCTCTGAATTTTGCTTATAATTATAACCTATTTAATCACAGAAGA
ACCCCTGCAGAGGTGGAGTTCAAGGTTGCATACAATAACAGGAGATCACAGTTTTGAAGT
CTAGCACAGATTAAAAACCACAGATGTACCATTTATAAGACACACACTGATTGTCTCTTA
AACTACATATTGACTCCTTATGAACATTATTTTTTAAATAAAGTAGTGCATCTAGGACAA
TCAGTCACACAATTCACACAGCCCTGAAAAGTTTTTTCAGTGCCAACTACCAGTTGGTCA
TGAAACGTGAATGAGCTTGAGACACTGTTCATTCCTAAGATTCAACCAAGGATTGGCTAA
AACAATGGAACACCTCTGCTTAAGAAGGCTATGACCTTCCCTCCCTTCCTTCACAACTTA
GTTTTGTTTGATTTTATTTTTGGGTGGTGTTTTGGTTGCACATGGCTAGAATGCTTTTTG
ATCACTTTGCNAATCAGGATAACCAATGATCTAAAACTATGACAGGATCTTAAGCAGATG
GNTTTGGCCATTTCATGTGCTGGTTTGTGAGC
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Restriction Sites: NotI-NotI

ACCN: NM_021728

Insert Size: 2300 bp

OTI Disclaimer: Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.

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

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_021728.2, NP_068374.1

RefSeq Size: 2209 bp

RefSeq ORF:	894 bp
Locus ID:	5015
UniProt ID:	P32243
Cytogenetics:	14q22.3
Domains:	homeobox, TF_Otx
Protein Families:	Embryonic stem cells, Induced pluripotent stem cells, Stem cell - Pluripotency, Transcription Factors
Gene Summary:	This gene encodes a member of the bicoid subfamily of homeodomain-containing transcription factors. The encoded protein acts as a transcription factor and plays a role in brain, craniofacial, and sensory organ development. The encoded protein also influences the proliferation and differentiation of dopaminergic neuronal progenitor cells during mitosis. Mutations in this gene cause syndromic microphthalmia 5 (MCOPS5) and combined pituitary hormone deficiency 6 (CPHD6). This gene is also suspected of having an oncogenic role in medulloblastoma. Alternative splicing results in multiple transcript variants encoding distinct isoforms. Pseudogenes of this gene are known to exist on chromosomes two and nine. [provided by RefSeq, Jul 2012] Transcript Variant: This variant (1) encodes the longer isoform (a). Variants 1 and 5 encode the same protein (isoform a).