

## Product datasheet for **RG207479**

### OTX2 (NM\_021728) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	OTX2 (NM_021728) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	OTX2
Synonyms:	CPHD6; MCOPS5
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG207479 representing NM_021728 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGCATCGCC**

ATGATGTCTTATCTTAAGCAACCGCCTTACGCAGTCAATGGGCTGAGTCTGACCACTTCGGGTATGGACT  
TGCTGCACCCCTCCGTGGGCTACCCGGGGCCCTGGGCTTCTTGTCCCGCAGCCACCCCCGGAAACAGCG  
CCGGGAGAGGACGACGTTCACTCGGGCGCAGCTAGATGTGCTGGAAGCACTGTTTGCCAAGACCCGGTAC  
CCAGACATCTTCATGCGAGAGGAGGTGGCACTGAAAATCAACTTGCCCGAGTCGAGGGTGCAGGTATGGT  
TTAAGAATCGAAGAGCTAAGTCCGCCAACCAACAGCAACAACAGCAGAATGGAGGTCAAAACAAAGTGAG  
ACCTGCCAAAAAGAAGACATCTCCAGCTCGGGAAGTGAGTTCAGAGAGTGAACAAGTGGCCAATCACT  
CCCCCTCTAGCACCTCAGTCCCGACCATTGCCAGCAGCAGTGCTCCTGTGTCTATCTGGAGCCAGCTT  
CCATCTCCCCACTGTCAGATCCCTTGTCCACCTCCTCTTCTGTCATGCAGAGGTCCTATCCCATGACCTA  
TACTCAGGCTTCAGGTTATAGTCAAGGATATGCTGGCTCAACTTCCTACTTTGGGGGCATGGACTGTGGA  
TCATATTTGACCCCTATGCATCACCAGCTTCCCGACCAGGGGCCACACTCAGTCCCATGGGTACCAATG  
CAGTCACCAGCCATCTCAATCAGTCCCCAGCTTCTTTCCACCCAGGGATATGGAGCTTCAAGCTTGGG  
TTTTAACTCAACCACTGATTGCTTGGATTATAAGGACCAAACTGCCTCCTGGAAGCTTAACTTCAATGCT  
GACTGCTTGGATTATAAAGATCAGACATCCTCGTGGAAATTCAGGTTTTG

**ACGCGT**ACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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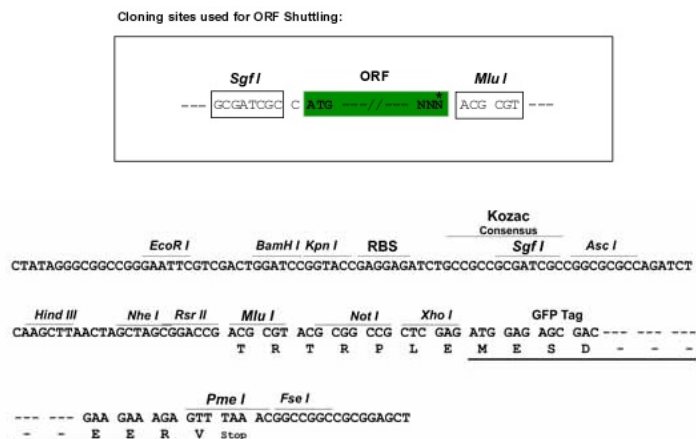
**Protein Sequence:** >RG207479 representing NM\_021728  
Red=Cloning site Green=Tags(s)

MMSYLKQPPYAVNGLSLTTSMDLLHPSVGYGPWASCPAATPRKQRRERTTFTRAQLDVLEALFAKTRY  
 PDIFMREEVALKINLPESRVQVWFKNRRRAKCRQQQQQQNGGQNKVRPAKKKTSAPAREVSSSESGTSGQFT  
 PPSSTSVPPTIASSAPVSIWSPASISPLSDPLSTSSSCMQRSYPMTYTQASGYSQGYAGSTSYFGGMDCG  
 SYLTPMHHLQPGPGATLSPMGTNVAVTSHLNQSPASLSTQGYGASSLGFNSTTDCLDYKDQTAWSKLNFNNA  
 DCLDYKDQTSWKFKVQL

TRTRPLE - GFP Tag - V

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_021728

**ORF Size:** 891 bp

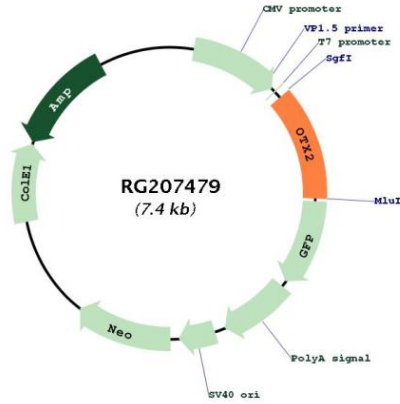
**OTI Disclaimer:** Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of 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](mailto: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](#)

**OTI Annotation:** This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>RefSeq:</b>	<a href="#">NM_021728.4</a>
<b>RefSeq Size:</b>	2209 bp
<b>RefSeq ORF:</b>	894 bp
<b>Locus ID:</b>	5015
<b>UniProt ID:</b>	<a href="#">P32243</a>
<b>Cytogenetics:</b>	14q22.3
<b>Domains:</b>	homeobox, TF_Otx
<b>Protein Families:</b>	Embryonic stem cells, Induced pluripotent stem cells, Stem cell - Pluripotency, Transcription Factors
<b>Gene Summary:</b>	<p>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]</p>

Product images:



Circular map for RG207479