

## Product datasheet for **RC221797**

### Tyrosinase (TYR) (NM\_000372) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Tyrosinase (TYR) (NM_000372) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Tyrosinase
Synonyms:	ATN; CMM8; OCA1; OCA1A; OCAIA; SHEP3
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide Sequence:**

>RC221797 representing NM\_000372  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**GCGATCGCC**

ATGCTCCTGGCTGTTTTGTACTGCCTGCTGTGGAGTTCCAGACCTCCGCTGGCCATTTCCCTAGAGCCT  
 GTGTCTCCTCTAAGAACCCTGATGGAGAAGGAATGCTGTCCACCGTGGAGCGGGGACAGGAGTCCCTGTGG  
 CCAGCTTTTCAGGCAGAGGTTCTGTGCAATATCCTTCTGTCCAATGCACCACTTGGGCCTCAATTTCCC  
 TTCACAGGGGTGGATGACCGGGAGTCGTGGCCTCCGCTTTTTATAATAGGACCTGCCAGTCTCTGGCA  
 ACTTCATGGGATTCAACTGTGGAACCTGCAAGTTGGCTTTTGGGGACAACTGCACAGAGAGACGACT  
 CTTGGTGAGAAGAAACATCTTCGATTTGAGTGCCCCAGAGAAGGACAAATTTTTTGCCTACCTCACTTTA  
 GCAAAGCATACCATCAGCTCAGACTATGTCATCCCATAGGGACCTATGGCCAAATGAAAAATGGATCAA  
 CACCCATGTTAAACGACATCAATATTTATGACCTCTTTGTCTGGATGCATTATTATGTGTCATGGATGC  
 ACTGCTTGGGGGATCTGAAATCTGGAGAGACATTGATTTTGCCCATGAAGCACCAGCTTTTCTGCCTTGG  
 CATAGACTCTTCTTGTTCGCGTGGGAACAAGAAATCCAGAAGCTGACAGGAGATGAAAACTCACTATTC  
 CATATTGGGACTGGCGGGATGCAGAAAAGTGTGACATTTGCACAGATGAGTACATGGGAGGTGACACCC  
 CAAAACTCTAATTACTCAGCCAGCATCATTCTTCTCCTTTGGCAGATTGTCTGTAGCCGATTGGAG  
 GAGTACAACAGCCATCAGTCTTTATGCAATGGAACGCCGAGGGACCTTACGGCGTAATCTCGAAACC  
 ATGACAAATCCAGAACCCTAAGGCTCCCTCTTCAGCTGATGTAGAATTTGCCTGAGTTTGACCAATA  
 TGAATCTGGTCCATGGATAAAGCTGCCAATTTACGCTTTAGAAATACACTGGAAGGATTTGCTAGTCCA  
 CTTACTGGGATAGCGGATGCCTCTCAAAGCAGCATGCACAATGCCTTGCACATCTATATGAATGGAACAA  
 TGTCCCAGGTACAGGGATCTGCCAACGATCCTATCTTCTTCTTACCATGCATTTGTTGACAGTATTTT  
 TGAGCAGTGGCTCCGAAGGCACCGTCTCTTCAAGAAAGTTTATCCAGAAGCCAATGCACCCATTGGACAT  
 AACCGGAATCCTACATGGTTCCTTTTATACCACTGTACAGAAATGGTGATTTCTTTATTTTATCCAAAG  
 ATCTGGGCTATGACTATAGCTATCTACAAGATTGACACCCAGACTCTTTTCAAGACTACATTAAGTCCTA  
 TTTGGAACAAGCGAGTGGATCTGGTATGGCTCCTTGGGGCGGCATGGTAGGGGCCGCTCTCACTGCC  
 CTGCTGGCAGGGCTTGTGAGCTTGTGTGTGTCACAAGAGAAGCAGCTTCTGAAGAAAAGCAGCCAC  
 TCCTCATGGAGAAAGAGGATTACCACAGCTTGATCAGAGCCATTA

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>RC221797 representing NM\_000372  
 Red=Cloning site Green=Tags(s)

MLLAVLYCLLWSFQTSAGHFPRACVSSKNLMEKECCPPWSGDRSPCGQLSGRGCQNILLSNAPLGPQFP  
 FTGVDRESWPSVFNRTQCQSGNFMGFNCGNCKFGFWGNCTERRLLVRRNIFDLSAFEKDKFFAYLTL  
 AKHTISSDYVPIIGTYGQMKNGSTPMFNDINIYDLFVWMHYVVSMDALLGGSEIWRDIDFAHEAPAFLPW  
 HRLFLLRWEQEIQLTGDENFTIPYWDWRDAEKDICTDEYMGQHPNPNLLSPASFFSSWQIVCSRLE  
 EYNHQSLCNGTPEGPLRRNPGNHDKSRTPRLPSSADVEFCLSLTQYESGSMKAAANFSFRNTLEGFASP  
 LTGIADASQSSMHNALHIYMNGTMSQVQGSANDPIFLLHFAFVDSIFEQWLRHRPLQEVYPEANAPIGH  
 NRESYMPFIPLYRNGDFFISSKDLGYDYSYLQSDPDSFQDIKSYLEQASRIWSWLLGAAMVGAULTA  
 LLAGLVSLLCRHKRQQLPEEKQPLLMKEDYHSLYQSHL

**TRTRPLEQKLI**SEEDLAANDILDYKDDDDKV

**Chromatograms:**

[https://cdn.origene.com/chromatograms/mg3128\\_a01.zip](https://cdn.origene.com/chromatograms/mg3128_a01.zip)

**Restriction Sites:**

Sgfl-MluI

Cloning Scheme:



ACCN: NM\_000372

ORF Size: 1587 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\\_000372.5](#)

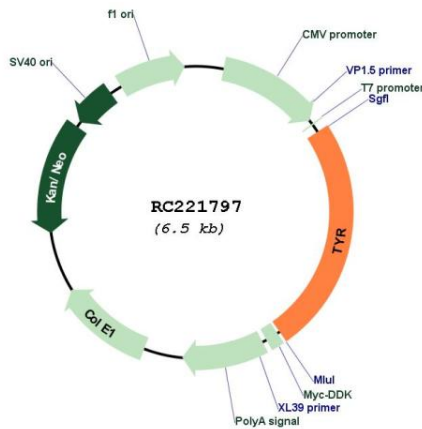
RefSeq Size: 1964 bp

RefSeq ORF: 1590 bp

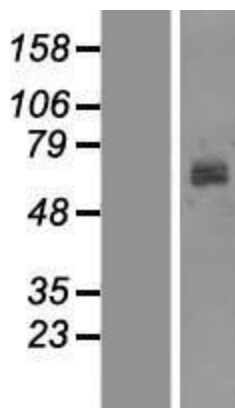
Locus ID: 7299

**UniProt ID:** [P14679](#)  
**Cytogenetics:** 11q14.3  
**Protein Families:** Transmembrane  
**Protein Pathways:** Melanogenesis, Metabolic pathways, Riboflavin metabolism, Tyrosine metabolism  
**MW:** 60.39 kDa  
**Gene Summary:** The enzyme encoded by this gene catalyzes the first 2 steps, and at least 1 subsequent step, in the conversion of tyrosine to melanin. The enzyme has both tyrosine hydroxylase and dopa oxidase catalytic activities, and requires copper for function. Mutations in this gene result in oculocutaneous albinism, and nonpathologic polymorphisms result in skin pigmentation variation. The human genome contains a pseudogene similar to the 3' half of this gene. [provided by RefSeq, Oct 2008]

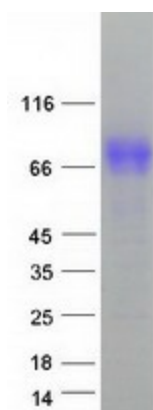
### Product images:



Circular map for RC221797



Western blot validation of overexpression lysate (Cat# [LY424756]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC221797 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified TYR protein (Cat# [TP321797]). The protein was produced from HEK293T cells transfected with TYR cDNA clone (Cat# RC221797) using MegaTran 2.0 (Cat# [TT210002]).