

## Product datasheet for **RC211218**

### Tyrosine Hydroxylase (TH) (NM\_000360) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Tyrosine Hydroxylase (TH) (NM_000360) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Tyrosine Hydroxylase
Synonyms:	DYT5b; DYT14; TYH
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



[View online »](#)

**ORF Nucleotide Sequence:**

>RC211218 representing NM\_000360.  
 Blue=ORF Red=Cloning site Green=Tag(s)

```

GCTCGTTAGTGAACCGTCAGAATTTTGTAAACGACTCACTATAGGGCGGCCGGGAATTCGTGACTG
GATCCGGTACCGAGGAGATCTGCCGCCGCGATCGCC
ATGCCACCCCGACGCCACCCACGCCACAGGCCAAGGGCTCCGCAGGGCCGTGTCTGAGCTGGACGCC
AAGCAGCGCAGAGCCATCATGTCCCCGGTTTCATTGGGCGCAGGCAGAGCCCTCATCGAGGACCCCGC
AAGGAGCCGGGAGGCGCGGTGGCAGCAGTGGCCGCTGCAGTCCCCCTCGGAGCCCGGGGACCCCTGGAG
GCTGTGGCCTTTGAGGAGAAGGAGGGGAAGGCCATGCTAAACCTGCTCTTCTCCCGAGGGCCACCAAG
CCCTCGGCGCTGTCCCGAGCTGTGAAGGTGTTGAGACGTTTGAAGCCAAAATCCACCATCTAGAGACC
CGGCCCGCCAGAGGCCGCGAGCTGGGGCCCCACCTGGAGTACTTCGTGCGCCTCGAGGTGCGCCGA
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CCTGACCTGGACTTGACCACCCGGCTTCTCGGACCAGGTGTACCGCCAGCGCAGGAAGCTGATTGCT
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ACCTGGAAGGAGGTCTACACCACGCTGAAGGGCTCTACGCCACGCACGCTGCGGGGAGACCTGGAG
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TCCCCTGAGCCGGACTGCTGCCACGAGCTGTGGGGCAGTGCCTCATGCTGGCCGACCGCACCTTCGCG
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CTGTCTCCTCCTACGGGAGCTCCTGCACTGCCTGTCTGAGGAGCCTGAGATTCCGGGCTTCGACCT
GAGGCTGCGGCGCTGCAGCCCTACCAAGACCAGACGTACCAAGTCACTACTTCTGAGAGCTTC
AGTGACGCCAAGGACAAGCTCAGGAGCTATGCCTCACGCATCCAGCGCCCTTCTCCGTGAAGTTCGAC
CCGTACACGCTGGCCATCGACGTGCTGGACAGCCCCAGGCCGTGCGGCGCTCCCTGGAGGGTGTCCAG
GATGAGCTGGACACCCTTGCCCATGCGTGAGTGCCATTGGC
AGCGGACCGACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGAT
ATCCTGGATTACAAGGATGACGACGATAAGGTTTAA
  
```

**Protein Sequence:**

>Peptide sequence encoded by RC211218  
 Blue=ORF Red=Cloning site Green=Tag(s)

```

MPTPDATTPQAKGFRRVSELDAKQAEAIMSPRFIGRRQSLIEDARKEREAAVAVAVAAVPSEPGDPLE
AVAFEEKEGKAMLNLLFSRATKPSALSRVAVFETFEAKIHLETRPAQRPRAGGPHLEYFVRLEVRR
GDLAALLSGVRQVSESVRSPAGPKVPWFPRKVSSELDKCHHLVTKFDPDLDDHPGFSDQVYRQRRLIA
EIAFYRQHGDPVPRVEYTAEEIATWKEVYTTLKGLYATHACGEHLEAFALLERFSYREDNIPQLEDVS
RFLKERTGFQLRPVAGLLSARDFLASLAFRVFQCTQYIRHASSPMHSPEPDCHELLGHVPLADRTFA
QFSQDIGLASLGASDEEIEKLSLYWFTVEFGLCKQNGEVKAYGALLSSYGELLHCLSEEPEIRAFDP
EAAAVQPYQDQTYQSVYFVSESFSDAKDKLRSYASRIQRPFVSKFDPYTLAIDVLDSPQAVRRSLEGVQ
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SGPTRTRPLEQKLISEEDLAANDILDYKDDDDKV
  
```

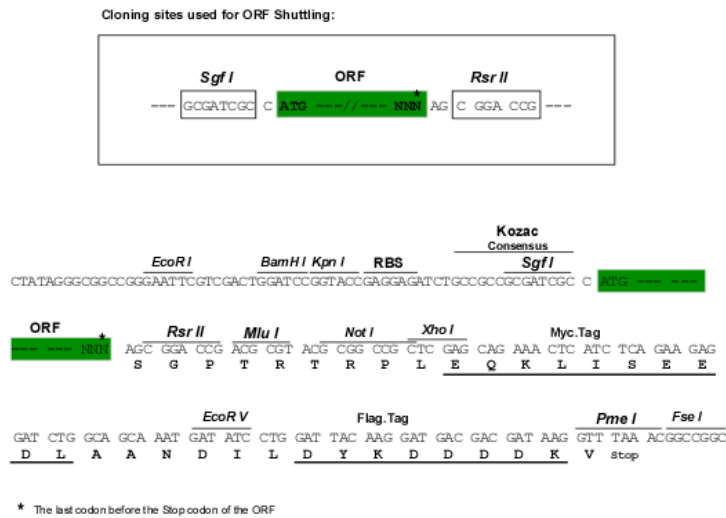
Recombinant protein using RC211218 also available, [TP311218M](#)

**Chromatograms:**

[https://cdn.origene.com/chromatograms/mk6620\\_h11.zip](https://cdn.origene.com/chromatograms/mk6620_h11.zip)

**Restriction Sites:**

Sgfl-RsrII

**Cloning Scheme:**


**ACCN:** NM\_000360

**ORF Size:** 1491 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 Size:** 1817 bp

**RefSeq ORF:** 1494 bp

**Locus ID:** 7054

**UniProt ID:** [P07101](#)

**Cytogenetics:** 11p15.5

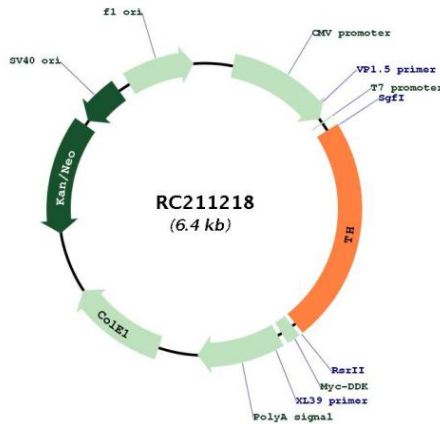
**Protein Families:** Druggable Genome

**Protein Pathways:** Metabolic pathways, Parkinson's disease, Tyrosine metabolism

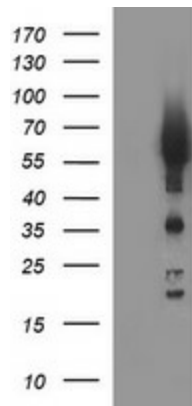
**MW:** 55.7 kDa

**Gene Summary:** The protein encoded by this gene is involved in the conversion of tyrosine to dopamine. It is the rate-limiting enzyme in the synthesis of catecholamines, hence plays a key role in the physiology of adrenergic neurons. Mutations in this gene have been associated with autosomal recessive Segawa syndrome. Alternatively spliced transcript variants encoding different isoforms have been noted for this gene. [provided by RefSeq, Jul 2008]

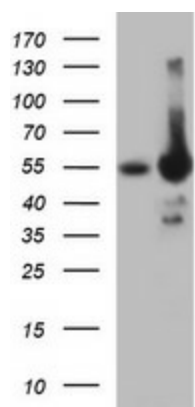
**Product images:**



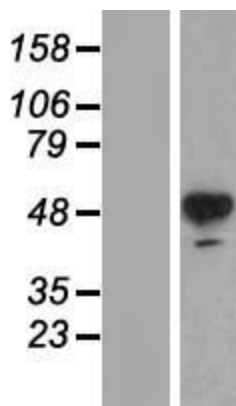
Circular map for RC211218



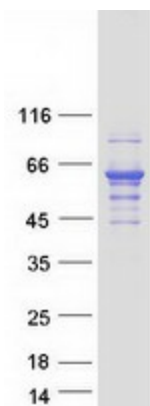
HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY TH (Cat# RC211218, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-TH (Cat# [TA506541]). Positive lysates [LY424777] (100ug) and [LC424777] (20ug) can be purchased separately from OriGene.



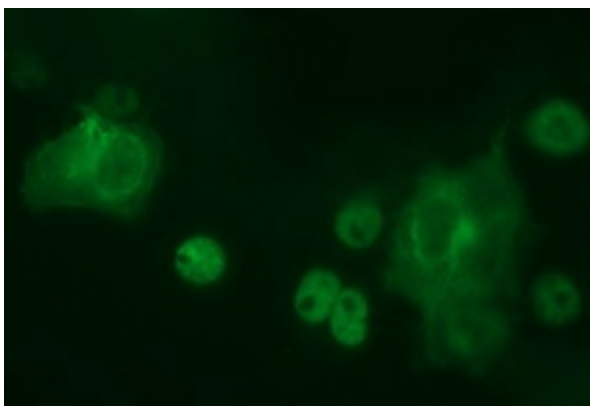
HEK293T cells were transfected with the pCMV6-ENTRY control (Left lane) or pCMV6-ENTRY TH (RC211218, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-TH ([TA506542]). Positive lysates [LY424777] (100ug) and [LC424777] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY424777]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC211218 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified TH protein (Cat# [TP311218]). The protein was produced from HEK293T cells transfected with TH cDNA clone (Cat# RC211218) using MegaTran 2.0 (Cat# [TT210002]).



Anti-TH mouse monoclonal antibody ([TA506542]) immunofluorescent staining of COS7 cells transiently transfected by pCMV6-ENTRY TH (RC211218).