

## Product datasheet for **RG221254**

### Tryptophan Hydroxylase (TPH1) (NM\_004179) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Tryptophan Hydroxylase (TPH1) (NM_004179) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Tryptophan Hydroxylase
Synonyms:	TPRH; TRPH
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>RG221254 representing NM\_004179  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCCCGCATCGCC

ATGATTGAAGACAATAAGGAGAACAAGACCATTCTTAGAAAGGGAAGAGCAAGTCTCATTTTTCTCT  
 TAAAGAATGAAGTTGGAGGACTTATAAAAGCCCTGAAAATCTTTTCAGGAGAAGCATGTGAATCTGTTACA  
 TATCGAGTCCCGAAAATCAAAAAGAAGAACTCAGAATTTGAGATTTTTGTTGACTGTGACATCAACAGA  
 GAACAATTGAATGATATTTTTCTCTGCTGAAGTCTCATACCAATGTTCTCTGTGAATCTACCAGATA  
 ATTTTACTTTGAAGGAAGATGGTATGAAACTGTTCTTGGTTTCCAAAGAAGATTTCTGACCTGGACCA  
 TTGTGCCAACAGAGTTCTGATGTATGGATCTGAACTAGATGCAGACCATCCTGGCTTCAAAGACAATGTC  
 TACCGTAAACGTCGAAAGTATTTTGGCGACTTGGCTATGAACTATAAACATGGAGACCCCATTTCAAAGG  
 TTGAATCACTGAAGAGGAGATTAAGACCTGGGAACCGTATTCCAAGAGCTCAACAACTCTACCCAAC  
 CCATGCTTGCAGAGAGTATCTCAAAAACCTACCTTTGCTTCTAAATATTGTGGATATCGGGAGGATAAT  
 ATCCCACAATTGGAAGATGTCTCCAACCTTTTAAAGAGCGTACAGGTTTTTCCATCCGCTCTGTGGCTG  
 GTTACTTATCACCAAGAGATTTCTTATCAGGTTTACGCTTTTCGAGTTTTTCACTGCACTCAATATGTGAG  
 ACACAGTTCAGATCCCTTCTATACCCAGAGCCAGATACTGCCATGAACTCTTAGGTATGTCCCGCTT  
 TTGGCTGAACCTAGTTTTGCCAATTCTCCAAGAAAATTGGCTTGGCTTCTTTGGCGCTTCAGAGGAGG  
 CTGTTCAAAAACCTGGCAACGTGCTACTTTTTCACTGTGGAGTTTGGTCTATGTAACAAGATGGACAGCT  
 AAGAGTCTTTGGTGTGGCTTACTTTCTTCTATCAGTGAACCAACATGCACCTTTCTGGACATGCCAAA  
 GTAAAGCCCTTTGATCCCAAGATTACCTGCAACAGGAATGTCTTATCACAACCTTTCAAGATGTCTACT  
 TTGTATCTGAAAGTTTTGAAGATGCAAAGGAGAAGATGAGAGAATTTACCAAAAACAATTAAGCGTCCATT  
 TGGAGTGAAGTATAATCCATATACACGGAGTATTAGATCCTGAAAGACACCAAGAGCATAACAGTGCC  
 ATGAATGAGCTGCAGCATGATCTCGATGTTGTCAGTGATGCCCTTGCTAAGGTCAGCAGGAAGCCGAGTA  
 TC

ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTTAA

**Protein Sequence:**

>RG221254 representing NM\_004179  
 Red=Cloning site Green=Tags(s)

MIEDNKENKDHSLEGRASLIFSLKNEVGGLIKALKIFQEKHVNLHIESRKSRRNSEFEIFVDCDINR  
 EQLNDFHLLKSHTNVLSVNLDPNFTLKEDGMETVPWFPKKISDLDHANRVLMYGSELDADHPGFKDNV  
 YRKRKYFADLAMNYKHGDPKPKVEFTVEEIKTWGTVFQELNKL YPTHACREYLNPLLSKYCYREDN  
 IPQLEDVSNFLKERTGFSIRPVAGYLSRDFLSGLAFRVFHTQYVVRHSSDPFYTPEDTCHHELLGHVPL  
 LAEPSFAQFSQEI GLASLGASEEAVQKLATCYFFTFVEFGLCKQDQQLRVFGAGLLSSI SELKHALSGHAK  
 VKPFPDKITCKQECLITTFQDVYFVSESFEDAKEKMRFTKTIKRPFGVKYNPYTRSIQILKDKTSITSA  
 MNELQHDL DVVSDALAKVSRKPSI

TRTRPLE – GFP Tag – V

**Restriction Sites:**

SgfI-MluI

**Cloning Scheme:**


**ACCN:** NM\_004179

**ORF Size:** 1332 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.

**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).

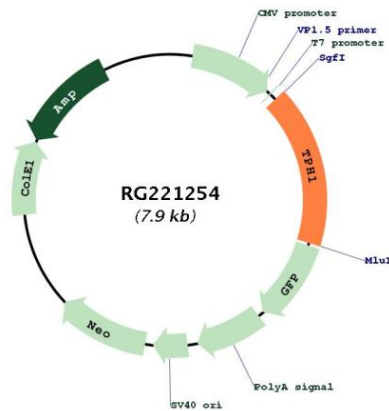
- Reconstitution Method:**
1. Centrifuge at 5,000xg for 5min.
  2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
  3. Close the tube and incubate for 10 minutes at room temperature.
  4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the 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\\_004179.3](#)

RefSeq Size: 1335 bp  
 RefSeq ORF: 1335 bp  
 Locus ID: 7166  
 UniProt ID: [P17752](#)  
 Cytogenetics: 11p15.1  
 Domains: bipterin\_H, ACT  
 Protein Families: Druggable Genome  
 Protein Pathways: Metabolic pathways, Tryptophan metabolism  
 Gene Summary:

This gene encodes a member of the aromatic amino acid hydroxylase family. The encoded protein catalyzes the first and rate limiting step in the biosynthesis of serotonin, an important hormone and neurotransmitter. Mutations in this gene have been associated with an elevated risk for a variety of diseases and disorders, including schizophrenia, somatic anxiety, anger-related traits, bipolar disorder, suicidal behavior, addictions, and others.[provided by RefSeq, Apr 2009]

**Product images:**



Circular map for RG221254