

Product datasheet for **RC221193**

Tryptophan 5 hydroxylase 2 (TPH2) (NM_173353) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Tryptophan 5 hydroxylase 2 (TPH2) (NM_173353) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Tryptophan 5 hydroxylase 2
Synonyms:	ADHD7; NTPH
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>RC221193 representing NM_173353
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**GCGATCGCC**

ATGCAGCCAGCAATGATGATGTTTTCCAGTAAATACTGGGCACGGAGAGGGTTTTCCCTGGATTCAGCAG
 TGCCCGAAGAGCATCAGCTACTTGGCAGCTCAACACTAAATAAACCTAACTCTGGCAAAAATGACGACAA
 AGGCAACAAGGGAAGCAGCAAACGTGAAGCTGCTACCGAAAAGTGCAAGACAGCAGTTGTTTTCTCCTTG
 AAGAATGAAGTTGGTGGATTGGTAAAAGCACTGAGGCTCTTTCAGGAAAAACGTGTCAACATGGTTCATA
 TTGAATCCAGGAAATCTCGGCGAAGAAGTTCTGAGGTTGAAATCTTTGTGGACTGTGAGTGTGGGAAAAAC
 AGAATTCAATGAGCTCATTGAGTTGCTGAAATTTCAAACCACTATTGTGACGCTGAATCTCCAGAGAAC
 ATTTGGACAGAGGAAGAAGAGCTAGAGGATGTGCCCTGGTTCCTCGGAAGATCTCTGAGTTAGACAAAT
 GCTCTCACAGAGTTCTCATGTATGGTTCTGAGCTTGATGCTGACCACCCAGGATTAAGGACAATGTCTA
 TCGACAGAGAAGAAAGTATTTTGTGGATGTGGCCATGGGTATAAATATGGTCAGCCATTCCCAGGGTG
 GAGTATACTGAAGAAGAACTAAAACCTGGGGTGTGTATTCCGGGAGCTCTCCAACTCTATCCCCTC
 ATGCTTGCCGAGAGTATTTGAAAACTCCCTCTGCTGACTAAATACTGTGGCTACAGAGAGGACAATGT
 GCCTCACTCGAAGATGTCTCCATGTTTCTGAAAGAAAGGTCTGGCTTACCGGTGAGGCCGGTGGCTGGA
 TACCTGAGCCACGAGACTTTCTGGCAGGACTGGCCTACAGAGTGTCCACTGTACCCAGTACATCCGGC
 ATGGCTCAGATCCCCTACACCCAGAACCCAGACACATGCCATGAACTCTGGGACATGTTCCACTACT
 TGCGGATCCTAAGTTTGTCTAGTTTTCAACAAGAAATAGGTCTGGCGTCTCTGGGAGCATCAGATGAAGT
 GTTCAGAACTAGCCACGTGCTATTTCTCACAATCGAGTTTGGCCTTTGCAAGCAAGAAGGGCAACTGC
 GGGCATATGGAGCAGGACTCCTTTCTCATTGGAGAATTAAGCAGCCCTTTCTGACAAGGCATGTGT
 GAAAGCCTTTGACCCAAAGACAACCTTGTACAGGAATGCCTTATCACCACCTCCAGGAAGCCTACTTT
 GTTTCAGAAAGTTTTGAAGAAGCCAAAGAAAAGATGAGGGACTTTGCAAAGTCAATTACCCGTCCCTTCT
 CAGTATACTTCAATCCCTACACACAGAGTATTGAAATCTGAAAGACACCAGAAGTATTGAAATGTGGT
 GCAGGACCTTCGACGCGACTTGAATACAGTGTGTGATGCTTTAAACAAAATGAACCAATATCTGGGGATT

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC221193 representing NM_173353
 Red=Cloning site Green=Tags(s)

MQPAMMMFSSKYWARRGFSLDSAVPEEHQLLGSSTLNKPNKNDKGNKGSSKREAAATESGKTAVVFSL
 KNEVGGGLVKALRLFQEKRVNMVHIESRKSRRRSSEVEIFVDCECGKTEFNELIQLLKFQTTIVTLNPPEN
 IWTEEELEDVWPFPRKISELDKCSHRVLMYGSSELDADHPGFKDNVYRQRKYFVDVAMGYKYGQPIPRV
 EYTEEETKTWGVVVFRELKLYPTHACREYLKNFPLLTKYCYREDNVPQLEDVSMFLKERSGFTVRPVAG
 YLSRDFLAGLAYRVFHCTQYIRHGSPLYTPEPDTHELLGHVPLLADPKFAQFSQEI GLASLGASDED
 VQKLATCYFFTIEFGLCKQEQQLRAYGALLSSIGELKHALSDKACVKAFDPKTTCLQECLITTFQEAYF
 VSESFEEAKEKMRDFAKSI TRPFSVYFNPYTQSIEILKDRSIEENVVQDLRSDLNTVCDALNKMNQYLGI

TRTRPLEQKLI SEEDLAANDILDYKDDDDKV

Chromatograms:

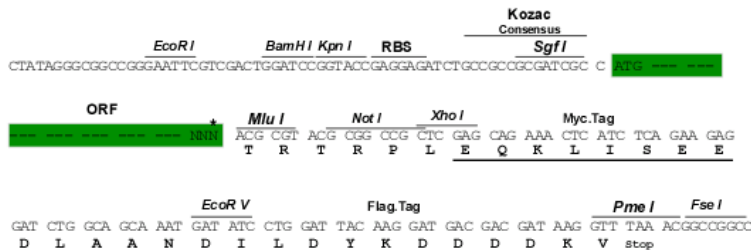
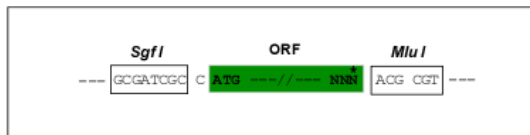
https://cdn.origene.com/chromatograms/mk8043_c12.zip

Restriction Sites:

Sgfl-Mlul

Cloning Scheme:

Cloning sites used for ORF Shuttling:



* The last codon before the Stop codon of the ORF

ACCN: NM_173353

ORF Size: 1470 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.

RefSeq: [NM_173353.4](#)
RefSeq Size: 2360 bp

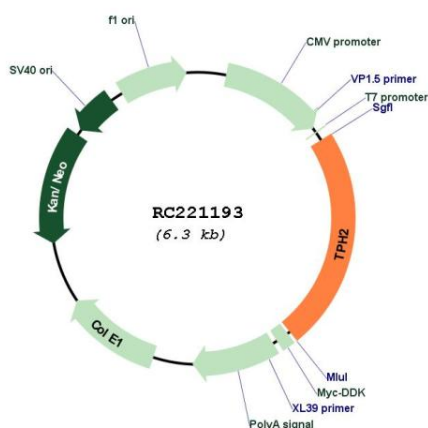
RefSeq ORF: 1473 bp

Locus ID: 121278

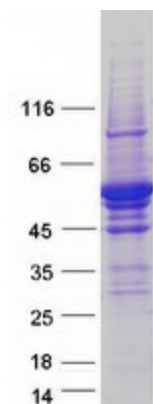
UniProt ID: [Q8IWU9](#)
Cytogenetics: 12q21.1

Protein Families:	Druggable Genome
Protein Pathways:	Metabolic pathways, Tryptophan metabolism
MW:	56.1 kDa
Gene Summary:	This gene encodes a member of the pterin-dependent aromatic 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 may be associated with psychiatric diseases such as bipolar affective disorder and major depression. [provided by RefSeq, Feb 2016]

Product images:



Circular map for RC221193



Coomassie blue staining of purified TPH2 protein (Cat# [TP321193]). The protein was produced from HEK293T cells transfected with TPH2 cDNA clone (Cat# RC221193) using MegaTran 2.0 (Cat# [TT210002]).