

## Product datasheet for **RG227700**

### **P4HA2 (NM\_001142598) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	P4HA2 (NM_001142598) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	P4HA2
Synonyms:	MYP25
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>RG227700 representing NM\_001142598  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGACTGACCTGATTTATGCAGAGAAAGAGCTGGTGCAGTCTCTGAAAGAGTACATCCTTGTGGAGGAAG  
 CCAAGCTTTCCAAGATTAAGAGCTGGGCCAACAAATGGAAGCCTTGACTAGCAAGTCAGCTGCTGATGC  
 TGAGGGCTACCTGGCTCACCTGTGAATGCCTACAACTGGTGAAGCGGCTAAACACAGACTGGCCTGCG  
 CTGGAGGACCTTGTCTGCAGGACTCAGCTGCAGGTTTTATCGCCAACCTCTCTGTGCAGCGGCAGTTCT  
 TCCCCACTGATGAGGACGAGATAGGAGCTGCCAAAGCCCTGATGAGACTTCAGGACACATACAGGCTGGA  
 CCCAGGCACAATTTCCAGAGGGGAATCCAGGAACCAAGTACCAGGCAATGCTGAGTGTGGATGACTGC  
 TTTGGGATGGGCCCTCGGCCTACAATGAAGGGGACTATTATCATACGGTGTGTGGATGGAGCAGGTGC  
 TAAAGCAGCTTGATGCCGGGAGGAGGCCACCACAACCAAGTACAGGTGCTGGACTACCTCAGCTATGC  
 TGTCTTCCAGTTGGGTGATCTGCACCGTCCCTGGAGCTACCCGCCGCTGCTCTCCCTTGACCCAAGC  
 CACGAACGAGCTGGAGGGAATCTGCGGTACTTTGAGCAGTTATTGGAGGAAGAGAGAGAAAAACGTTAA  
 CAAATCAGACAGAAGCTGAGCTAGCAACCCAGAGGCATCTATGAGAGGCCTGTGGACTACCTGCCTGA  
 GAGGGATGTTTACGAGAGCCTCTGTCTGGGGAGGGTGTCAAACCTGACACCCCGTAGACAGAAGAGGCTT  
 TTCTGTAGGTACCACCATGGCAACAGGGCCCCACAGCTGCTCATTGCCCCCTTCAAAGAGGAGGACGAGT  
 GGGACAGCCCGCACATCGTCAGGTAACGATGTCATGCTGTATGAGGAAATCGAGAGGATCAAGGAGAT  
 CGCAAAACCTAACTTGCACGAGCCACCGTTCTGTATCCCAAGACAGGAGTCTCACTGTCGCCAGCTAC  
 CGGGTTTCAAAGCTCCTGGCTAGAGGAAGATGATGACCCTGTTGTGGCCGAGTAAATCGTCGGATGC  
 AGCATATCACAGGGTTAACAGTAAAGACTGCAGAATTGTTACAGGTTGCAAATTATGGAGTGGGAGGACA  
 GTATGAACCGCACTTCGACTTCTTAGGGACCTTTTGACAGCGGCTCAAACAGAGGGGAATAGGTTA  
 GCGACGTTTTCTTAACTACATGAGTGATGTAGAAGCTGGTGGTGCCACCGTCTTCCCTGATCTGGGGCTG  
 CAATTTGGCCTAAGAAGGTACAGCTGTGTTCTGGTACAACCTCTTGGGAGCGGGGAAGGTGACTACCG  
 AACAGACATGCTGCCTGCCCTGTGTTGTGGGCTGCAAGTGGTCTCCAATAAGTGGTTCCATGAACGA  
 GGACAGGAGTTCTTGAGACCTTGTGGATCAACAGAAGTTGAC

**ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA**

**Protein Sequence:**

>RG227700 representing NM\_001142598  
 Red=Cloning site Green=Tags(s)

MTDLIYAEKELVQSLKEYILVEEAKLSKIKSWANKMEALTSKSAADAEGYLAHPVNAYKLVKRLNTDWPAL  
 LEDLVLQDSAAGFIANLSVQRQFFPTDEDEIGAALKMRLQDYLDPGTISRGEIPGTYQAMLVSDDC  
 FGMGRSAYNEGDIYHTVLWMEQVLKQLDAGEEATTTKSQVLDYLSYAVFQLGDLHRALELTRRLLSLDPS  
 HERAGGNLRYFEQLLEEREKLTNQTEAELATPEGIYERPVLYLPERDVYESLCRGEVGLTPRRQKRL  
 FCRYHHGNRAPQLLIAPFKEEEDWSPHIVRYDVMSDEEIERIKEIAKPKLARATVRDPKTVGLTVASY  
 RVSKSSWLEEDDPVVARVNRMQHITGLTVKTAELLQVANYVGGQYEPHFDPSRRPFDSGLKTEGNRL  
 ATFLNYMSDVEAGGATVFPDLGAAIWPKKGTAVFWYNLLRSGEGDYRTRHAACPVLVGCKWVSNKWFHER  
 GQEFLLRPGSTEV

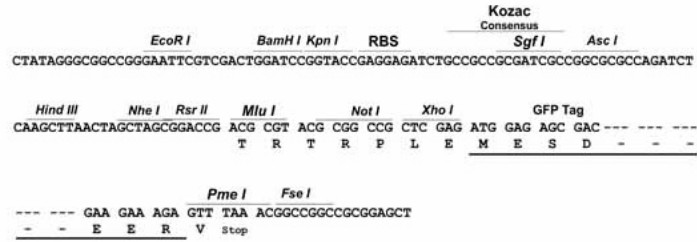
**TRTRPLE - GFP Tag - V**

**Restriction Sites:**

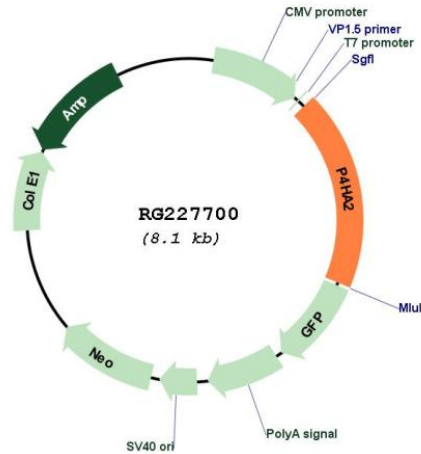
Sgfl-MluI

Cloning Scheme:

Cloning sites used for ORF Shutting:



Plasmid Map:



**ACCN:** NM\_001142598

**ORF Size:** 1599 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).

<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>	<u>NM_001142598.1, NP_001136070.1</u>
<b>RefSeq Size:</b>	2246 bp
<b>RefSeq ORF:</b>	1602 bp
<b>Locus ID:</b>	8974
<b>UniProt ID:</b>	<u>O15460</u>
<b>Cytogenetics:</b>	5q31.1
<b>Protein Families:</b>	Druggable Genome
<b>Protein Pathways:</b>	Arginine and proline metabolism, Metabolic pathways
<b>Gene Summary:</b>	<p>This gene encodes a component of prolyl 4-hydroxylase, a key enzyme in collagen synthesis composed of two identical alpha subunits and two beta subunits. The encoded protein is one of several different types of alpha subunits and provides the major part of the catalytic site of the active enzyme. In collagen and related proteins, prolyl 4-hydroxylase catalyzes the formation of 4-hydroxyproline that is essential to the proper three-dimensional folding of newly synthesized procollagen chains. Alternatively spliced transcript variants encoding different isoforms have been described. [provided by RefSeq, Jul 2008]</p>