

## Product datasheet for **RG221402**

### MYH (MUTYH) (NM\_012222) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	MYH (MUTYH) (NM_012222) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	MUTYH
Synonyms:	MYH
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>RG221402 representing NM\_012222  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**GCGATCGCC**

ATGACACCGCTCGTCTCCCGCCTGAGTCGTCTGTGGCCATCATGAGGAAGCCACGAGCAGCCGTGGGAA  
 GTGGTCACAGGAAGCAGGCAGCCAGCCAGGAAGGGAGGCAGAAGCATGCTAAGAACAACAGTCAGGCCAA  
 GCCTTCTGCCTGTGATGGGATGATTGCTGAGTGTCTGGGGCCCCAGCAGGCCTGGCCAGGCAGCCGGAA  
 GAGGTGGTATTGCAGGCCTCTGTCTCCTCATACCATCTATTAGAGACGTAGCTGAAGTCACAGCCTTCC  
 GAGGGAGCCTGCTAAGCTGGTACGACCAAGAGAAACGGGACCTACCATGGAGAAGACGGGCAGAAGATGA  
 GATGGACCTGGACAGGCGGGCATATGCTGTGTGGGTCTCAGAGGTCATGCTGCAGCAGACCCAGGTTGCC  
 ACTGTGATCAACTACTATACCGGATGGATGCAGAAGTGGCCTACACTGCAGGACCTGGCCAGTGTCTCCC  
 TGGAGGAGGTGAATCAACTCTGGGCTGGCCTGGGCTACTATTCTCGTGGCCGGCGGCTGCAGGAGGGAGC  
 TCGGAAGGTGGTAGAGGAGCTAGGGGGCCACATGCCACGTACAGCAGAGACCCTGCAGCAGCTCCTGCCT  
 GCGTGGGGCGCTACACAGCTGGGGCCATTGCCTCTATCGCCTTTGGCCAGGCAACCGGTGTGGTGGATG  
 GCAACGTAGCACGGGTGCTGTGCCGTGTCCGAGCCATTGGTGTGATCCCAGCAGCACCCCTGTTTCCCA  
 GCAGCTCTGGGTCTAGCCCAGCAGCTGGTGGACCCAGCCCGGCCAGGAGATTTCAACCAAGCAGCCATG  
 GAGCTAGGGGCCACAGTGTGTACCCACAGCGCCACTGTGCAGCCAGTGCCTGTGGAGAGCCTGTGCC  
 GGGCACGCCAGAGAGTGGAGCAGGAACAGCTCTTAGCCTCAGGGAGCCTGTGGGAGCCTGTGACGTGGA  
 GGAGTGTGCTCCCAACTGGACAGTGCCACCTGTGCCTGCCTCCCTCGGAGCCCTGGGACCAGACCCTG  
 GGAGTGGTCAACTTCCCCAGAAAGGCCAGCCGCAAGCCCCCAGGGAGGAGAGCTCTGCCACCTGTGTTCC  
 TGGAACAGCCTGGGGCCCTTGGGGCCAAATTCTGTGTTGAGAGGCCCAACTCAGGTCGTGTCGACAGG  
 ACTGTGGGAGTTCCTCGTCCGTGACCTGGGAGCCCTCAGAGCAGCTTACAGCGCAAGGCCCTGCTGCAGGAA  
 CTACAGCGTTGGGCTGGGCCCTCCAGCCAGCACCTCCGACCTTGGGGAGTTGTCCACACCTTCT  
 CTCACATCAAGCTGACATATCAAGTATATGGGCTGGCCTTGAAGGGCAGACCCAGTGACCACCGTACC  
 ACCAGGTGCTCGCTGGCTGACGCAGGAGGAATTTACACCCGAGCTGTTCCACCGCCATGAAAAAGGTT  
 TTCCGTGTGTATCAGGGCCAACAGCCAGGGACCTGTATGGGTTCCAAAAGGTCCCAGGTGCTCCTCCGT  
 GCAGTCGAAAAAGCCCCGCATGGGCCAGCAAGTCTGGATAATTTCTTTCGGTCTCACATCTCCACTGA  
 TGCACACAGCCTCAACAGTGCAGCCAG

**ACGCGTACGCGGCCGCTCGAG** - GFP Tag - GTTTAA

**Protein Sequence:**

>RG221402 representing NM\_012222  
 Red=Cloning site Green=Tags(s)

MTPLVSRLSRLWAIMRKPRAAVSGHRKQAASQEGRQKHAKNNSQAKPSACDGMIAECPGAPAGLARQPE  
 EVVLQASVSSYHLFRDVAEVTAFRGSLLSWYDQEKRDLPWRRRAEDEMDLDRRAYAVVWSEVMLQQTQVA  
 TVINYTTGWMQKWPTLQDLASASLEEVNQLWAGLGYYSRGRRLQEGARKVVEELGGHMPRTAETLQQLLP  
 GVGRYTAGAIASIAFGQATGVVDGNVARVLCRVRAIGADPSSTLVSQQLWGLAQQLVDPARPGDFNQAAM  
 ELGATVCTPQRPLCSQCPVESLRCRARQVEQEQLLASGSLSGSPDVEECAPNTGQCHLCLPPSEPWDQTL  
 GVVNFPKASRKPPREESSATCVLEQPGALGAQILLVQRPNSGLLAGLWEFSPVTWEPSEQLQRKALLQE  
 LQRWAGPLPATHLRHLGEVVHTFSHIKLYQVYGLALEGQTPVTVPPGARWLTQEEFHTAAVSTAMKKV  
 FRVYQQQPGTCMGSKRSQVSSPCSRKKPRMQQVLDNFFRSHISTDAHSLNSAAQ

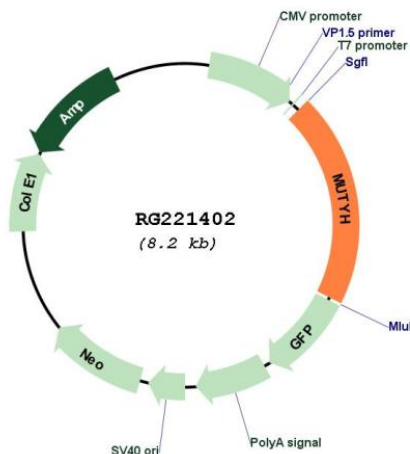
**TRTRPLE** - GFP Tag - V

**Restriction Sites:**

Sgfl-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shutting:

**Plasmid Map:**

<b>ACCN:</b>	NM_012222
<b>ORF Size:</b>	1638 bp
<b>OTI Disclaimer:</b>	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. <a href="#">More info</a>
<b>OTI Annotation:</b>	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
<b>Components:</b>	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>	<a href="#">NM_012222.2</a> , <a href="#">NP_036354.1</a>
<b>RefSeq Size:</b>	1854 bp
<b>RefSeq ORF:</b>	1641 bp
<b>Locus ID:</b>	4595
<b>UniProt ID:</b>	<a href="#">Q9UIF7</a>
<b>Cytogenetics:</b>	1p34.1
<b>Domains:</b>	NUDIX, HHH, ENDO3c, FES
<b>Protein Families:</b>	Druggable Genome, Stem cell - Pluripotency
<b>Protein Pathways:</b>	Base excision repair
<b>Gene Summary:</b>	This gene encodes a DNA glycosylase involved in oxidative DNA damage repair. The enzyme excises adenine bases from the DNA backbone at sites where adenine is inappropriately paired with guanine, cytosine, or 8-oxo-7,8-dihydroguanine, a major oxidatively damaged DNA lesion. The protein is localized to the nucleus and mitochondria. This gene product is thought to play a role in signaling apoptosis by the introduction of single-strand breaks following oxidative damage. Mutations in this gene result in heritable predisposition to colorectal cancer, termed MUTYH-associated polyposis (MAP). Multiple transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Apr 2017]