

## Product datasheet for **RG203174**

### Glutathione Synthetase (GSS) (NM\_000178) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Glutathione Synthetase (GSS) (NM_000178) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Glutathione Synthetase
Synonyms:	GSHS; HEL-S-64p; HEL-S-88n
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



[View online »](#)

**ORF Nucleotide Sequence:**

>RG203174 representing NM\_000178  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**GCGATCGCC**

ATGGCCACCAACTGGGGAGCCTCTTGACAGGATAAACAGCAGCTAGAGGAGCTGGCACGGCAGGCCGTGG  
 ACCGGGCCCTGGCTGAGGGAGTATTGCTGAGGACCTCACAGGAGCCACTTCCTCGAGGTTGGTGAGCTA  
 TGCCCCATTACGCTCTTCCCCTCACTGGTCCCCAGTGCCTGCTGGAGCAAGCCTATGCTGTGCAGATG  
 GACTTCAACCTGCTAGTGGATGCTGTGACGCAGAACGCTGCCTTCTGGAGCAAACCTTTCCAGCACCA  
 TCAAACAGGATGACTTTACCGCTCGTCTCTTTGACATCCACAAGCAAGTCTAAAAGAGGGCATTGCCCA  
 GACTGTGTTCTGGGCCCTGAATCGCTCAGACTACATGTTCCAGCGCAGCGCAGATGGCTCCCCAGCCCTG  
 AAACAGATCGAAATCAACACCATCTCTGCCAGCTTTGGGGCCTGGCCTCCCGGACCCAGCTGTGCACC  
 GACATGTTCTCAGTGCCTGAGTAAGACCAAAGAAGCTGGCAAGATCCTCTAATAATCCAGCAAGGG  
 ACTGGCCCTGGGAATTGCCAAAGCCTGGGAGCTCTACGGCTCACCAATGCTCTGGTGTACTGATTGCT  
 CAAGAGAAGGAAAGAAACATATTTGACCAGCGTGCATAGAGAATGAGCTACTGGCCAGGAACATCCATG  
 TGATCCGACGAACATTTGAAGATATCTCTGAAAAGGGTCTCTGGACCAAGACCGAAGGCTGTTTGTGGA  
 TGGCCAGGAAATTGCTGTGGTTTACTTCCGGGATGGCTACATGCCTCGTCAGTACAGTCTACAGAATTGG  
 GAAGCAGTCTACTGCTGGAGAGGTCACATGCTGCCAAGTGCCAGACATTGCCACCCAGCTGGCTGGGA  
 CTAAGAAGGTGCAGCAGGAGCTAAGCAGGCCGGGCATGCTGGAGATGTTGCTCCCTGGCCAGCCTGAGGC  
 TGTGGCCCGCCTCCGCGCCACCTTTGCTGGCCTTACTCACTGGATGTGGGTGAAGAAGGGGACCGGCC  
 ATCGCCGAGGCCCTTGTGCCCTAGCCGGTTTGTGCTAAAGCCCAGAGAGAGGGTGGAGGTAACAACC  
 TATATGGGGAGGAAATGGTACAGGCCCTGAAACAGCTGAAGGACAGTGAGGAGAGGGCCTCTACATCCT  
 CATGGAGAAGATCGAACCTGAGCCTTTTGAGAATTGCCTGCTACGGCCTGGCAGCCCTGCCCGAGTGGTC  
 CAGTGCATTTTCAGAGCTGGGCATCTTTGGGGTCTATGTCAGGCAGGAAAAGACACTCGTGATGAACAAGC  
 ACGTGGGGCATCTACTTGAACCAAAGCCATCGAGCATGCAGATGGTGGTGTGGCAGCGGGAGTGGCAGT  
 CCTGGACAACCCATACCCTGTG

**ACGCGTACGCGGCCGCTCGAG** – GFP Tag – GTTTAA

**Protein Sequence:**

>RG203174 representing NM\_000178  
 Red=Cloning site Green=Tags(s)

MATNWSLLQDKQLEELARQAVDRALAEVLLRSTSQEPTSSEVVSYPFTLFPSLVPSALLEQAYAVQM  
 DFNLLVDAVSQNAAFLEQTLSSITKQDDFTARLFDIHKQVLKEGIAQTVFLGLNRSYMFQRSADGSPAL  
 KQIEINTISASFGLASRTPAVHRHVL SVLSKTKEAGKILSNNPSKGLALGIKAWELYGSPNALVLLIA  
 QEKERNIFDQRAIENELLARNIHRIRRFEDISEKGSLDQDRRLFVDGQEIADVYFRDGYMPRQYSLQNW  
 EARLLLLERSHAAKCPDIA TQLAGTKKVQQLSRPGMLEMLLPQPEAVARLRATFAGLYSLDVGEEGDQA  
 IAEALAPSRLFVLPQREGGNNLYGEEVQALKQLKDSEERASYILMEKIEPEPFENCLLRPGSPARV  
 QCISELGFVYVRQEKTLVMNKHVGHLLRKAIEHADGGVAAGVAVLDNPYPV

**TRTRPLE** – GFP Tag – V

**Restriction Sites:**

Sgfl-MluI

**Cloning Scheme:**


**ACCN:** NM\_000178

**ORF Size:** 1422 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\\_000178.4](#)

**RefSeq Size:** 1918 bp

**RefSeq ORF:** 1425 bp

**Locus ID:** 2937

**UniProt ID:** [P48637](#)

**Cytogenetics:** 20q11.22

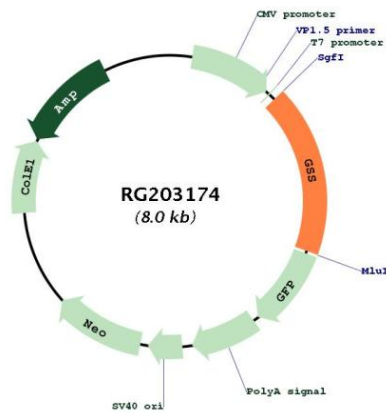
**Domains:** GSH\_synthase, GSH\_synth\_ATP

**Protein Families:** Druggable Genome

**Protein Pathways:** Glutathione metabolism, Metabolic pathways

**Gene Summary:** Glutathione is important for a variety of biological functions, including protection of cells from oxidative damage by free radicals, detoxification of xenobiotics, and membrane transport. The protein encoded by this gene functions as a homodimer to catalyze the second step of glutathione biosynthesis, which is the ATP-dependent conversion of gamma-L-glutamyl-L-cysteine to glutathione. Defects in this gene are a cause of glutathione synthetase deficiency. [provided by RefSeq, Jul 2008]

**Product images:**



Circular map for RG203174