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Product datasheet for RC203174

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:	Myc-DDK
Symbol:	Glutathione Synthetase
Synonyms:	GSHS; HEL-S-64p; HEL-S-88n
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)

View online »

ORF Nucleotide Sequence:

>RC203174 ORF sequence
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGGCCACCAACTGGGGGAGCCTCTTGCAGGATAAACAGCAGCTAGAGGAGCTGGCACGGCAGGCCGTGG
ACCGGGCCCTGGCTGAGGGAGTATTGCTGAGGACCTCACAGGAGCCCACTTCCTCGGAGGTGGTGAGCTA
TGCCCCATTCACGCTCTTCCCCTCACTGGTCCCCAGTGCCCTGCTGGAGCAAGCCTATGCTGTGCAGATG
GACTTCAACCTGCTAGTGGATGCTGTCAGCCAGAACGCTGCCTTCCTGGAGCAAACTCTTTCCAGCACCA
TCAAACAGGATGACTTTACCGCTCGTCTCTTTGACATCCACAAGCAAGTCCTAAAAGAGGGCATTGCCCA
GACTGTGTTCCTGGGCCTGAATCGCTCAGACTACATGTTCCAGCGCAGCGCAGATGGCTCCCCAGCCCTG
AAACAGATCGAAATCAACACCATCTCTGCCAGCTTTGGGGGCCTGGCCTCCCGGACCCCAGCTGTGCACC
GACATGTTCTCAGTGTCCTGAGTAAGACCAAAGAAGCTGGCAAGATCCTCTCTAATAATCCCAGCAAGGG
ACTGGCCCTGGGAATTGCCAAAGCCTGGGAGCTCTACGGCTCACCCAATGCTCTGGTGCTACTGATTGCT
CAAGAGAAGGAAAGAAACATATTTGACCAGCGTGCCATAGAGAATGAGCTACTGGCCAGGAACATCCATG
TGATCCGACGAACATTTGAAGATATCTCTGAAAAGGGGTCTCTGGACCAAGACCGAAGGCTGTTTGTGGA
TGGCCAGGAAATTGCTGTGGTTTACTTCCGGGATGGCTACATGCCTCGTCAGTACAGTCTACAGAATTGG
GAAGCACGTCTACTGCTGGAGAGGTCACATGCTGCCAAGTGCCCAGACATTGCCACCCAGCTGGCTGGGA
CTAAGAAGGTGCAGCAGGAGCTAAGCAGGCCGGGCATGCTGGAGATGTTGCTCCCTGGCCAGCCTGAGGC
TGTGGCCCGCCTCCGCGCCACCTTTGCTGGCCTCTACTCACTGGATGTGGGTGAAGAAGGGGACCAGGCC
ATCGCCGAGGCCCTTGCTGCCCCTAGCCGGTTTGTGCTAAAGCCCCAGAGAGAGGGTGGAGGTAACAACC
TATATGGGGAGGAAATGGTACAGGCCCTGAAACAGCTGAAGGACAGTGAGGAGAGGGCCTCCTACATCCT
CATGGAGAAGATCGAACCTGAGCCTTTTGAGAATTGCCTGCTACGGCCTGGCAGCCCTGCCCGAGTGGTC
CAGTGCATTTCAGAGCTGGGCATCTTTGGGGTCTATGTCAGGCAGGAAAAGACACTCGTGATGAACAAGC
ACGTGGGGCATCTACTTCGAACCAAAGCCATCGAGCATGCAGATGGTGGTGTGGCAGCGGGAGTGGCAGT
CCTGGACAACCCATACCCTGTG

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC203174 protein sequence
Red=Cloning site Green=Tags(s)

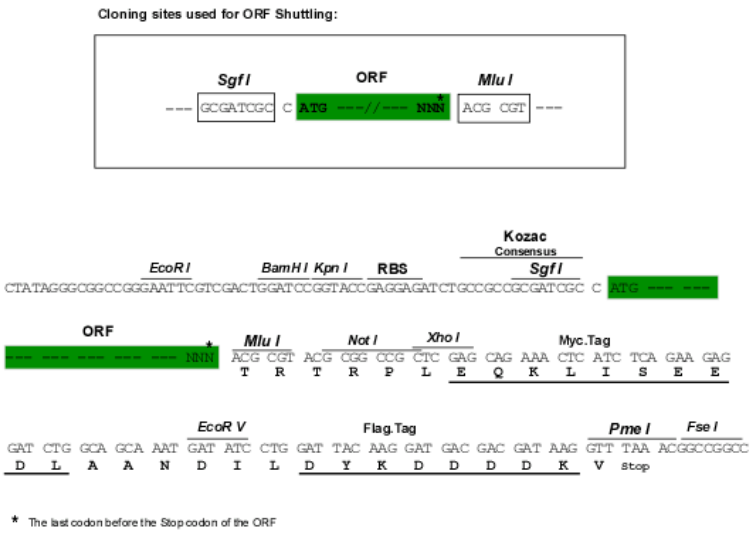
MATNWGSLLQDKQQLEELARQAVDRALAEGVLLRTSQEPTSSEVVSYAPFTLFPSLVPSALLEQAYAVQM
DFNLLVDAVSQNAAFLEQTLSSTIKQDDFTARLFDIHKQVLKEGIAQTVFLGLNRSDYMFQRSADGSPAL
KQIEINTISASFGGLASRTPAVHRHVLSVLSKTKEAGKILSNNPSKGLALGIAKAWELYGSPNALVLLIA
QEKERNIFDQRAIENELLARNIHVIRRTFEDISEKGSLDQDRRLFVDGQEIAVVYFRDGYMPRQYSLQNW
EARLLLERSHAAKCPDIATQLAGTKKVQQELSRPGMLEMLLPGQPEAVARLRATFAGLYSLDVGEEGDQA
IAEALAAPSRFVLKPQREGGGNNLYGEEMVQALKQLKDSEERASYILMEKIEPEPFENCLLRPGSPARVV
QCISELGIFGVYVRQEKTLVMNKHVGHLLRTKAIEHADGGVAAGVAVLDNPYPV

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6412_e10.zip

Restriction Sites: SgfI-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.

Note: Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

RefSeq: NM_000178.4

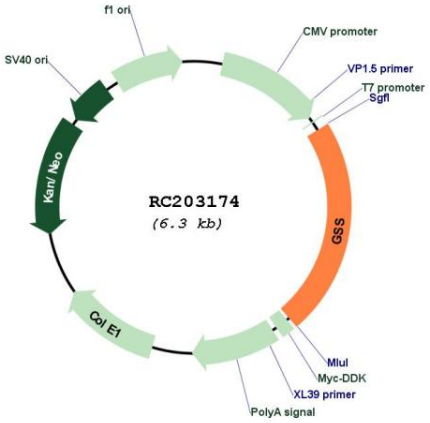
RefSeq Size: 1918 bp

RefSeq ORF: 1425 bp

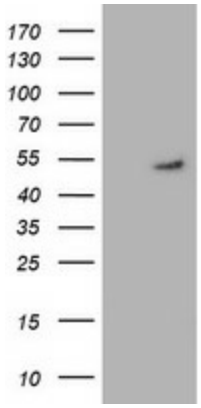
Locus ID: 2937

UniProt ID:	P48637
Cytogenetics:	20q11.22
Domains:	GSH_synthase, GSH_synth_ATP
Protein Families:	Druggable Genome
Protein Pathways:	Glutathione metabolism, Metabolic pathways
MW:	52.4 kDa
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]

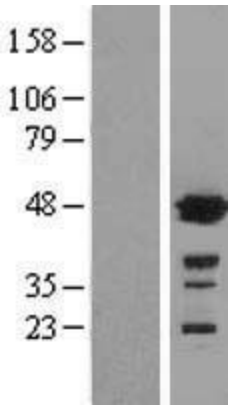
Product images:



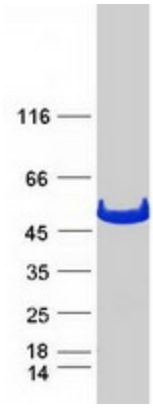
Circular map for RC203174



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY GSS (Cat# RC203174, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-GSS(Cat# [TA502094]). Positive lysates [LY424876] (100ug) and [LC424876] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY424876]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from un-transfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC203174 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified GSS protein (Cat# [TP303174]). The protein was produced from HEK293T cells transfected with GSS cDNA clone (Cat# RC203174) using MegaTran 2.0 (Cat# [TT210002]).