

Product datasheet for **RC200040**

Glutathione S Transferase theta 2 (GSTT2) (NM_000854) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Glutathione S Transferase theta 2 (GSTT2) (NM_000854) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Glutathione S Transferase theta 2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC200040 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGGCCTAGAGCTGTTTCTTGACCTGGTGTCCCAGCCCAGCCGCGCGTCTACATCTTCGCCAAGAAGA
ATGGCATCCCCTTAGAGCTGCGCACCGTGGATTTGGTCAAAGGGCAGCACAAGAGCAAGGAGTTCTTGCA
GATCAACAGCCTGGGGAAACTGCCGACGCTCAAGGATGGTGATTCATCTTGACCGAAAGCTCGGCCATC
CTGATTTACCTGAGCTGTAAGTACCAGACGCCGGACCACTGGTATCCATCTGACCTGCAGGCTCGTGCCC
GTGTTTCATGAGTACCTGGGCTGGCATGCCGACTGCATCCGTGGCACCTTTGGTATACCCCTGTGGTCCA
GGTGTGGGGCCACTCATTGGGGTCCAGGTGCCCGAGGAGAAGGTGGAACGCAACAGGACTGCCATGGAC
CAGGCCCTGCAATGGCTGGAGGACAAGTTCCTGGGGACAGGCCCTTCCTCGCTGGCCAGCAGGTGACAC
TGGCTGATCTCATGGCCCTGGAGGAGCTGATGCAGCCGGTGGCTCTCGGCTACGAACTGTTTGAGGGACG
GCCAGACTGGCAGCATGGCGTGGACGAGTGGAGGCTTTCCTGGGTGCTGAGCTATGCCAGGAGGCCAC
AGCATCATCTTGAGCATCTGGAACAGGCGGCCAAGAAAACCTCCCAACACCCTCACCAGAGGCCTATC
AGGCTATGCTGCTCGAATCGCCAGGATCCCC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCTGGATT
ACAAGGATGACGACGATAAGGTTTAA



Protein Sequence: >RC200040 protein sequence
 Red=Cloning site Green=Tags(s)

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MGLEFLDLVSQPSRAVYIFAKKNGIPELRTVDLVKGQHKSKFEFLQINSLGKPLTKDGFILTESSAI
LIYLSCKYQTPDHWYPSDLQARARVHEYLGWHADCIRGTFGIPLWVQVLGPLIGVQVPEEKVERNRTAMD
QALQWLKEDKFLGDRPFLAGQQVTLADLMALEELMQPVALGYELFEGRPRLAAWRGRVEAFLGAELCQEAH
SIILSILEQAAKKTLPTPSPEAYQAMLLRIARIP
  
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TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6386_e12.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_000854

ORF Size: 732 bp

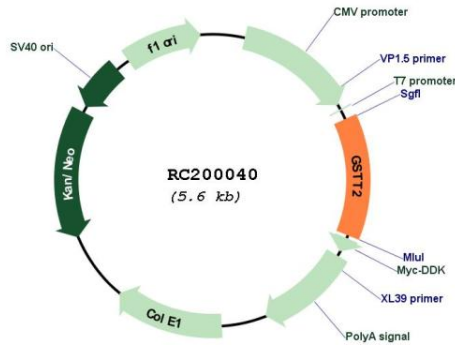
OTI Disclaimer: Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.

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](#)

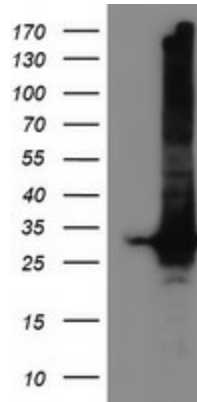
OTI Annotation: This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

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:	<ol style="list-style-type: none">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_000854.2 , NP_000845.1
RefSeq Size:	1136 bp
RefSeq ORF:	735 bp
Locus ID:	2953
UniProt ID:	P0CG29
Cytogenetics:	22q11.23
Domains:	GST_N, GST_C
Protein Pathways:	Drug metabolism - cytochrome P450, Glutathione metabolism, Metabolism of xenobiotics by cytochrome P450
MW:	27.5 kDa
Gene Summary:	The protein encoded by this gene, glutathione S-transferase (GST) theta 2 (GSTT2), is a member of a superfamily of proteins that catalyze the conjugation of reduced glutathione to a variety of electrophilic and hydrophobic compounds. Human GSTs can be divided into five main classes: alpha, mu, pi, theta, and zeta. The theta class includes GSTT1, GSTT2, and GSTT2B. GSTT2 and GSTT2B are nearly identical to each other, and share 55% amino acid identity with GSTT1. All three genes may play a role in human carcinogenesis. The GSTT2 gene is a pseudogene in some populations. [provided by RefSeq, Sep 2015]

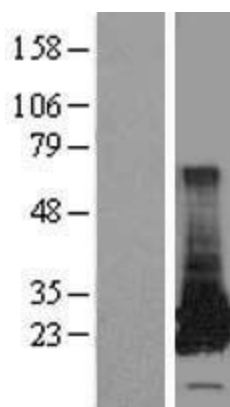
Product images:



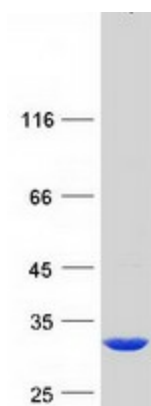
Circular map for RC200040



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY GSTT2 (Cat# RC200040, 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-GSTT2 (Cat# [TA501832]). Positive lysates [LY424485] (100ug) and [LC424485] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY424485]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC200040 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified GSTT2 protein (Cat# [TP300040]). The protein was produced from HEK293T cells transfected with GSTT2 cDNA clone (Cat# RC200040) using MegaTran 2.0 (Cat# [TT210002]).