

## Product datasheet for **RC204624**

### **GSTA3 (NM\_000847) Human Tagged ORF Clone**

#### Product data:

Product Type:	Expression Plasmids
Product Name:	GSTA3 (NM_000847) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	GSTA3
Synonyms:	GSTA3-3; GTA3
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC204624 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGGCAGGGAAGCCCAAGCTTCACTACTTCAATGGACGGGGCAGAATGGAGCCCATCCGGTGGCTCTTGG  
CTGCAGCTGGAGTGGAGTTTGAAGAGAAATTTATAGGATCTGCAGAAGATTTGGGAAAGTTAAGAAATGA  
TGGGAGTTTGATGTTCCAGCAAGTACCAATGGTTGAGATTGATGGGATTAAGTTGGTACAGACCAGAGCC  
ATTCTCAACTACATTGCCAGCAAATACAACCTCTACGGGAAAGACATAAAGGAGAGAGCCCTAATTGATA  
TGTATACAGAAGGTATGGCAGATTTGAATGAAATGATCCTTCTTCTGCCCTTATGTCGACCTGAGGAAAA  
AGATGCCAAGATTGCCTTGATCAAAGAGAAAACAAAAGTCGCTATTTCCCTGCCTTCGAAAAAGTGTTA  
CAGAGCCATGGACAAGACTACCTTGTGGCAACAAGCTGAGCCGGGCTGACATTAGCCTGGTGAACTTC  
TCTACTATGTGGAAGAGCTTGACTCCAGCCTTATCTCAAACCTCCCTCTGCTGAAGGCCCTGAAAACCG  
AATCAGCAACCTGCCACGGTGAAGAAGTTTCTACAGCCTGGCAGCCCAAGGAAGCCTCCCGCAGATGCA  
AAAGCTTTAGAAGAAGCCAGAAAGATTTTCAGGTTT

**ACGCGT**ACGCGGGCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA



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**Protein Sequence:** >RC204624 protein sequence  
 Red=Cloning site Green=Tags(s)

MAGKPKLHYFNGRGRMEPIRWLLAAAGVEFEFKFIGSAEDLGKLRNDGSLMFQQVPMVEIDGIKLVQTRA  
 ILNYIASKYNLYGKDIKERALIDMYTEGMADLNEMILLPLCRPEEKDAKIALIKEKTKSRYPFAFEKVL  
 QSHGQDYLVGNKLSRADISLVELLYYVEELDSSLSISNFPLLKALKTRISNLPVKKFLQPGSPRKPPADA  
 KALEEARKIFRF

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mk6549\\_f05.zip](https://cdn.origene.com/chromatograms/mk6549_f05.zip)

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shuttling:



\* The last codon before the Stop codon of the ORF

**ACCN:** NM\_000847

**ORF Size:** 666 bp

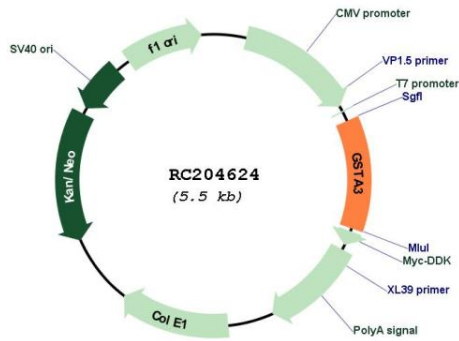
**OTI Disclaimer:** Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of 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](mailto: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](#)

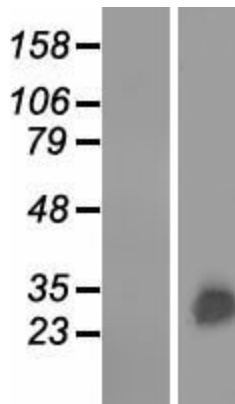
**OTI Annotation:** This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

<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>Note:</b>	Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.
<b>RefSeq:</b>	<a href="#">NM_000847.2</a>
<b>RefSeq Size:</b>	915 bp
<b>RefSeq ORF:</b>	669 bp
<b>Locus ID:</b>	2940
<b>UniProt ID:</b>	<a href="#">Q16772</a>
<b>Cytogenetics:</b>	6p12.2
<b>Protein Pathways:</b>	Drug metabolism - cytochrome P450, Glutathione metabolism, Metabolism of xenobiotics by cytochrome P450
<b>MW:</b>	25.3 kDa
<b>Gene Summary:</b>	Cytosolic and membrane-bound forms of glutathione S-transferase are encoded by two distinct supergene families. These enzymes are involved in cellular defense against toxic, carcinogenic, and pharmacologically active electrophilic compounds. At present, eight distinct classes of the soluble cytoplasmic mammalian glutathione S-transferases have been identified: alpha, kappa, mu, omega, pi, sigma, theta and zeta. This gene encodes a glutathione S-transferase belonging to the alpha class genes that are located in a cluster mapped to chromosome 6. Genes of the alpha class are highly related and encode enzymes with glutathione peroxidase activity. However, during evolution, this alpha class gene diverged accumulating mutations in the active site that resulted in differences in substrate specificity and catalytic activity. The enzyme encoded by this gene catalyzes the double bond isomerization of precursors for progesterone and testosterone during the biosynthesis of steroid hormones. An additional transcript variant has been identified, but its full length sequence has not been determined. [provided by RefSeq, Jul 2008]

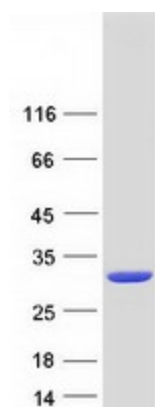
Product images:



Circular map for RC204624



Western blot validation of overexpression lysate (Cat# [LY424489]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC204624 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified GSTA3 protein (Cat# [TP304624]). The protein was produced from HEK293T cells transfected with GSTA3 cDNA clone (Cat# RC204624) using MegaTran 2.0 (Cat# [TT210002]).