

Product datasheet for **RG202479**

GSTA2 (NM_000846) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	GSTA2 (NM_000846) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	GSTA2
Synonyms:	GST2; GSTA2-2; GTA2; GTH2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG202479 representing NM_000846 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGC**C

ATGGCAGAGAAGCCCAAGCTCCACTACTCCAATATACGGGGCAGAATGGAGTCCATCCGGTGGCTCCTGG
CTGCAGCTGGAGTAGAGTTTGAAGAGAAATTTATAAAATCTGCAGAAGATTTGGACAAGTTAAGAAATGA
TGGATATTTGATGTTCCAGCAAGTGCCAATGGTTGAGATTGATGGGATGAAGCTGGTGCAGACCAGAGCC
ATTCTCAACTACATTGCCAGCAAATACAACCTCTATGGGAAAGACATAAAGGAGAAAGCCCTGATTGATA
TGTATATAGAAGGTATAGCAGATTTGGGTGAAATGATCCTTCTTCTGCCCTTTACTCAACCTGAGGAACA
AGATGCCAAGCTTGCCTTGATCCAAGAGAAAACAAAAATCGCTACTTCCCTGCCTTTGAAAAAGTCTTA
AAGAGCCACGGACAAGACTACCTTGTGGCAACAAGCTGAGCCGGGCTGACATTCACCTGGTGGAACTTC
TCTACTACGTGGAAGAGCTTGACTCTAGCCTTATTTCCAGCTTCCCTCTGCTGAAGGCCCTGAAAACCG
AATCAGTAACCTGCCACAGTGAAGAAGTTTCTACAGCCTGGCAGCCCAAGGAAGCTCCCATGGATGAG
AAATCTTTAGAAGAATCAAGGAAGATTTTCAGGTTT

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA



[View online »](#)

Protein Sequence: >RG202479 representing NM_000846
 Red=Cloning site Green=Tags(s)

MAEKPKLHYSNIRGRMESIRWLLAAAGVEFEKFIKSAEDLDKLRNDGYLMFQQVPMVEIDGMKLVQTRA
 ILNYIASKYNLYGKDIKEKALIDMYIEGIADLGEMILLPFTQPEEQDAKLALIQEKTKNRYFPFAFEKVL
 KSHGQDYLVGNKLSRADIHLVELLYVEELDSSLSISSFLLKALKTRISNLPVKKFLQPGSPRKPPMDE
 KSLEESRKIFRF

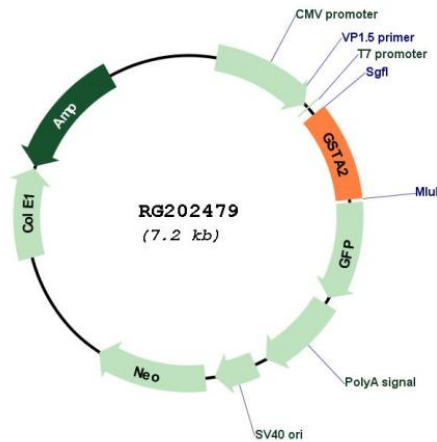
TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:



Plasmid Map:



ACCN: NM_000846

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 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:

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_000846.3](#), [NP_000837.2](#)

RefSeq Size: 976 bp

RefSeq ORF: 669 bp

Locus ID: 2939

UniProt ID: [P09210](#)

Cytogenetics: 6p12.2

Domains: GST_N, GST_C

Protein Pathways: Drug metabolism - cytochrome P450, Glutathione metabolism, Metabolism of xenobiotics by cytochrome P450

Gene Summary:

Cytosolic and membrane-bound forms of glutathione S-transferase are encoded by two distinct supergene families. These enzymes function in the detoxification of electrophilic compounds, including carcinogens, therapeutic drugs, environmental toxins and products of oxidative stress, by conjugation with glutathione. The genes encoding these enzymes are known to be highly polymorphic. These genetic variations can change an individual's susceptibility to carcinogens and toxins as well as affect the toxicity and efficacy of some drugs. 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. The alpha class genes, located in a cluster mapped to chromosome 6, are the most abundantly expressed glutathione S-transferases in liver. In addition to metabolizing bilirubin and certain anti-cancer drugs in the liver, the alpha class of these enzymes exhibit glutathione peroxidase activity thereby protecting the cells from reactive oxygen species and the products of peroxidation. [provided by RefSeq, Jul 2008]