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Product datasheet for RC202479

GSTA2 (NM_000846) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	GSTA2 (NM_000846) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	GSTA2
Synonyms:	GST2; GSTA2-2; GTA2; GTH2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC202479 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s) TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC GCCGCGATCGCC ATGGCAGAGAAGCCCAAGCTCCACTACTCCAATATACGGGGCAGAATGGAGTCCATCCGGTGGCTCCTGG CTGCAGCTGGAGTAGAGTTTGAAGAGAAATTTATAAAATCTGCAGAAGATTTGGACAAGTTAAGAAATGA TGGATATTTGATGTTCCAGCAAGTGCCAATGGTTGAGATTGATGGGATGAAGCTGGTGCAGACCAGAGCC ATTCTCAACTACATTGCCAGCAAATACAACCTCTATGGGAAAGACATAAAGGAGAAAGCCCTGATTGATA TGTATATAGAAGGTATAGCAGATTTGGGTGAAATGATCCTTCTTCTGCCCTTTACTCAACCTGAGGAACA AGATGCCAAGCTTGCCTTGATCCAAGAGAAAACAAAAAATCGCTACTTCCCTGCCTTTGAAAAAGTCTTA AAGAGCCACGGACAAGACTACCTTGTTGGCAACAAGCTGAGCCGGGCTGACATTCACCTGGTGGAACTTC TCTACTACGTGGAAGAGCTTGACTCTAGCCTTATTTCCAGCTTCCCTCTGCTGAAGGCCCTGAAAACCAG AATCAGTAACCTGCCCACAGTGAAGAAGTTTCTACAGCCTGGCAGCCCAAGGAAGCCTCCCATGGATGAG AAATCTTTAGAAGAATCAAGGAAGATTTTCAGGTTT ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT ACAAGGATGACGACGATAAGGTTTAA

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Protein Sequence:

>RC202479 protein sequence
Red=Cloning site Green=Tags(s)

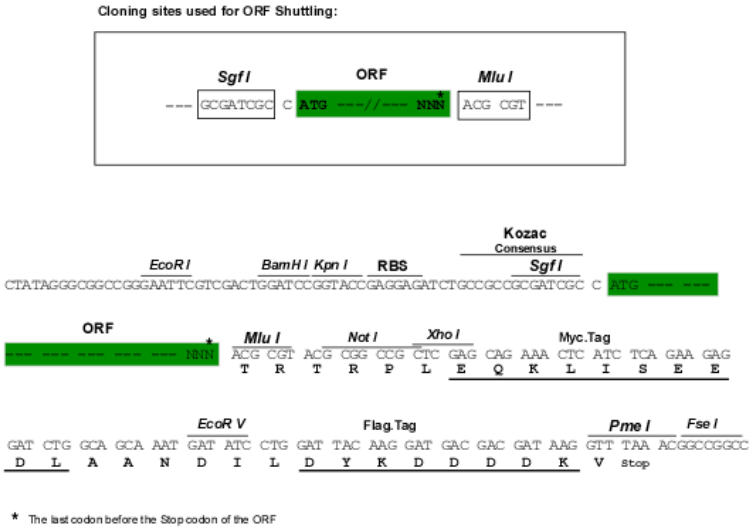
MAEKPKLHYSNIRGRMESIRWLLAAAGVEFEEKFIKSAEDLDKLRNDGYLMFQQVPMVEIDGMKLVQTRA
ILNYIASKYNLYGKDIKEKALIDMYIEGIADLGEMILLLPFTQPEEQDAKLALIQEKTKNRYFPAFEKVL
KSHGQDYLVGNKLSRADIHLVELLYYVEELDSSLISSFPLLKALKTRISNLPTVKKFLQPGSPRKPPMDE
KSLEESRKIFRF

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6391_f02.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_000846

ORF Size: 666 bp

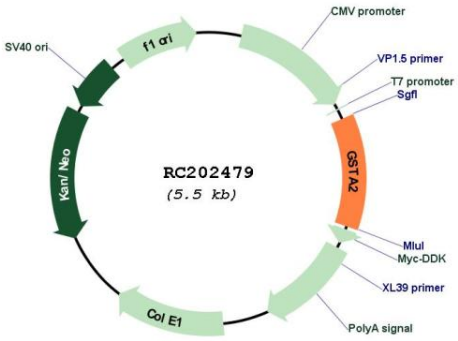
OTI Disclaimer: Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA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

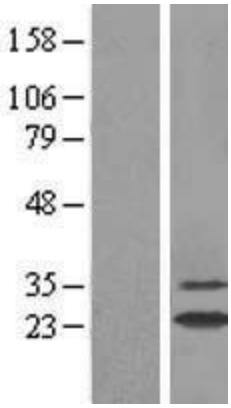
OTI Annotation: This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

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:	1320 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
MW:	25.7 kDa
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-tranferase 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]

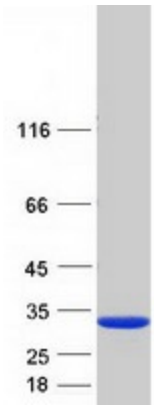
Product images:



Circular map for RC202479



Western blot validation of overexpression lysate (Cat# [LY424488]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from un-transfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC202479 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified GSTA2 protein (Cat# [TP302479]). The protein was produced from HEK293T cells transfected with GSTA2 cDNA clone (Cat# RC202479) using MegaTran 2.0 (Cat# [TT210002]).