

Product datasheet for **RC238607**

beta glucuronidase (GUSB) (NM_001284290) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	beta glucuronidase (GUSB) (NM_001284290) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	GUSB
Synonyms:	BG; MPS7
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin



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ORF Nucleotide Sequence:

>RC238607 representing NM_001284290
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGGCCCCGGGGTTCGGCGTTCCCTGGGCGCGCTCGGGCCGTTGTTGTGGGGCTGCGCGCTGGGGCTGC
 AGGGCGGGATGCTGTACCCAGGAGAGCCCGTCGCGGGAGTGAAGGAGCTGGACGGCCTCTGGAGCTT
 CCGCGCCGACTTCTCTGACAACCGACGCGGGGCTTCGAGGAGCAGTGGTACCGCGGCCCTGTGGGAG
 TCAGGCCCCACCGTGGACATGCCAGTCCCTCCAGCTTCAATGACATCAGCCAGGACTGGCGTCTGCGGC
 ATTTTGTGCGGCTGGGTGTGGTACGAACGGGAGGTGATCCTGCCGAGCGATGGACCCAGGACCTGCGCAC
 AAGAGTGGTGCTGAGGATTGGCAGTGCCATTCTATGCCATCGTGTGGTGAATGGGGTGCACACGCTA
 GAGCATGAGGGGGCTACCTCCCCTTCGAGGCCGACATCAGCAACCTGGTCCAGGTGCAGCTGACTGCAC
 AGACGTCAGTGGGCTGTGCTGACTTCTACACTCCCTGTGGGGATCCGACTGTGGCTGTACCCAA
 GAGCCAGTTCCTCATCAATGGGAAACCTTTCTATTTCCACGGTGTCAACAAGCATGAGGATGCGGACATC
 CGAGGGAAGGGCTTCGACTGGCCGCTGCTGGTGAAGGACTTCAACCTGCTTCGCTGGCTTGGTGCCAACG
 CTTTCCGTACCAGCCACTACCCCTATGCAGAGGAAGTGTGCAGATGTGTGACCGCTATGGGATTGTGGT
 CATCGATGAGTGTCCCGCGTGGGCTGGCGCTGCCGAGTTCCTCAACAACGTTTCTCTGCATACCCAC
 ATGCAGGTGATGGAAGAAGTGGTGCAGTAGGACAAGAACCACCCCGCGTGTGATGTGGTCTGTGGCCA
 ACGAGCCTGCGTCCCACCTAGAATCTGCTGGCTACTACTTGAAGTGGTGTGATCGTACACCAAATCCTT
 GGACCCCTCCCGGCTGTGACCTTTGTGAGCAACTCTAACTATGCAGCAGACAAGGGGGCTCCGATGTG
 GATGTGATCTGTTTGAACAGCTACTACTTTGGTATCAGACTACGGGCACCTGGAGTTGATTGAGTGC
 AGCTGGCCACCCAGTTTGAAGTGGTATAAGAAGTATCAGAAGCCATTATTGAGGAGTATGGAGC
 AGAAACGATTGCAGGGTTTACCAGGATCCACCTCTGATGTTCACTGAAGAGTACCAGAAAAGTCTGCTA
 GAGCAGTACCATCTGGTCTGGATCAAAAACGCAGAAAATACGTGGTGGAGAGCTCATTGGAATTTTG
 CCGATTTGATGACTGAACAGTACCCGACGAGAGTGTGGGGAATAAAAAGGGGATCTTCACTCGGCAGAG
 ACAACCAAAAAGTGCAGCGTTCCCTTTGCGAGAGAGATACTGGAAGATTGCCAATGAAACCAGGTATCCC
 CACTCAGTAGCCAAGTACAATGTTTGGAAAACAGCCTGTTTACT

ACCGGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC238607 representing NM_001284290
 Red=Cloning site Green=Tags(s)

MARGSAVAWAALGPLLWGCALGLQGGMLYPQESPSRECKELDGLWSFRADFSDNRRRGFEEQWYRRPLWE
 SGPTVDMVPVSSFNDISQDWRLRHFVGVWVYEREVILPERWTQDLRTRVVLRIKSAHSYAIWVWNGVDTL
 EHEGGYLPFEADISNLVQVQLTAQTSLGPVSDFYTLVPGIRTVAVTKSQFLINGKPFYFHGVNKHEDADI
 RGKGFDPVLLVKDFNLLRWLGANAFRTSHYPYAEVVMQMDRYGIVVIDECPVGLALPQFFNNVSLHHH
 MQVMEEVVRDKNHPAVVMWSVANEPASHLESAGYYLKMVIAHTKSLDPSRPVTFVSNVSYAADKGAPYV
 DVICLNSYYSWYHDYGHLELIQLQLATQFENWYKQKPIIQSEYGAETIAGFHQDPPLMFTEEYQKSL
 EQYHLGLDQKRRKYVVGELIWNFADFMTQSPTRVLGNKKGIFTRQRQPKSAAFLLRERYWKIANETRY
 HSVAKSQCLENSLFT

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites:

Sgfl-MluI

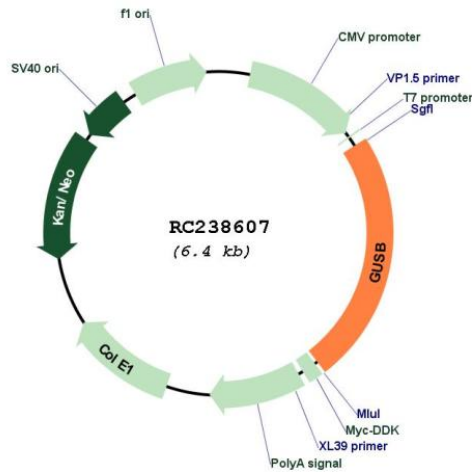
Cloning Scheme:

Cloning sites used for ORF Shuttling:



* The last codon before the Stop codon of the ORF

Plasmid Map:



ACCN: NM_001284290

ORF Size: 1515 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:	<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.
RefSeq:	NM_001284290.2
RefSeq Size:	1875 bp
RefSeq ORF:	1518 bp
Locus ID:	2990
UniProt ID:	P08236
Cytogenetics:	7q11.21
Protein Families:	Druggable Genome, Transmembrane
Protein Pathways:	Drug metabolism - other enzymes, Glycosaminoglycan degradation, Lysosome, Metabolic pathways, Pentose and glucuronate interconversions, Porphyrin and chlorophyll metabolism, Starch and sucrose metabolism
MW:	58.8 kDa
Gene Summary:	This gene encodes a hydrolase that degrades glycosaminoglycans, including heparan sulfate, dermatan sulfate, and chondroitin-4,6-sulfate. The enzyme forms a homotetramer that is localized to the lysosome. Mutations in this gene result in mucopolysaccharidosis type VII. Alternative splicing results in multiple transcript variants. There are many pseudogenes of this locus in the human genome.[provided by RefSeq, May 2014]