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Product datasheet for RG204325

beta glucuronidase (GUSB) (NM_000181) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	beta glucuronidase (GUSB) (NM_000181) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	beta glucuronidase
Synonyms:	BG; MPS7
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)

ORF Nucleotide Sequence:

>RG204325 representing NM_000181
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGGCCCGGGGGTCGGCGGTTGCCTGGGCGGCGCTCGGGCCGTTGTTGTGGGGCTGCGCGCTGGGGCTGC
AGGGCGGGATGCTGTACCCCCAGGAGAGCCCGTCGCGGGAGTGCAAGGAGCTGGACGGCCTCTGGAGCTT
CCGCGCCGACTTCTCTGACAACCGACGCCGGGGCTTCGAGGAGCAGTGGTACCGGCGGCCGCTGTGGGAG
TCAGGCCCCACCGTGGACATGCCAGTTCCCTCCAGCTTCAATGACATCAGCCAGGACTGGCGTCTGCGGC
ATTTTGTCGGCTGGGTGTGGTACGAACGGGAGGTGATCCTGCCGGAGCGATGGACCCAGGACCTGCGCAC
AAGAGTGGTGCTGAGGATTGGCAGTGCCCATTCCTATGCCATCGTGTGGGTGAATGGGGTCGACACGCTA
GAGCATGAGGGGGGCTACCTCCCCTTCGAGGCCGACATCAGCAACCTGGTCCAGGTGGGGCCCCTGCCCT
CCCGGCTCCGAATCACTATCGCCATCAACAACACACTCACCCCCACCACCCTGCCACCAGGGACCATCCA
ATACCTGACTGACACCTCCAAGTATCCCAAGGGTTACTTTGTCCAGAACACATATTTTGACTTTTTCAAC
TACGCTGGACTGCAGCGGTCTGTACTTCTGTACACGACACCCACCACCTACATCGATGACATCACCGTCA
CCACCAGCGTGGAGCAAGACAGTGGGCTGGTGAATTACCAGATCTCTGTCAAGGGCAGTAACCTGTTCAA
GTTGGAAGTGCGTCTTTTGGATGCAGAAAACAAAGTCGTGGCGAATGGGACTGGGACCCAGGGCCAACTT
AAGGTGCCAGGTGTCAGCCTCTGGTGGCCGTACCTGATGCACGAACGCCCTGCCTATCTGTATTCATTGG
AGGTGCAGCTGACTGCACAGACGTCACTGGGGCCTGTGTCTGACTTCTACACACTCCCTGTGGGGATCCG
CACTGTGGCTGTCACCAAGAGCCAGTTCCTCATCAATGGGAAACCTTTCTATTTCCACGGTGTCAACAAG
CATGAGGATGCGGACATCCGAGGGAAGGGCTTCGACTGGCCGCTGCTGGTGAAGGACTTCAACCTGCTTC
GCTGGCTTGGTGCCAACGCTTTCCGTACCAGCCACTACCCCTATGCAGAGGAAGTGATGCAGATGTGTGA
CCGCTATGGGATTGTGGTCATCGATGAGTGTCCCGGCGTGGGCCTGGCGCTGCCGCAGTTCTTCAACAAC
GTTTCTCTGCATCACCACATGCAGGTGATGGAAGAAGTGGTGCGTAGGGACAAGAACCACCCCGCGGTCG
TGATGTGGTCTGTGGCCAACGAGCCTGCGTCCCACCTAGAATCTGCTGGCTACTACTTGAAGATGGTGAT
CGCTCACACCAAATCCTTGGACCCCTCCCGGCCTGTGACCTTTGTGAGCAACTCTAACTATGCAGCAGAC
AAGGGGGCTCCGTATGTGGATGTGATCTGTTTGAACAGCTACTACTCTTGGTATCACGACTACGGGCACC
TGGAGTTGATTCAGCTGCAGCTGGCCACCCAGTTTGAGAACTGGTATAAGAAGTATCAGAAGCCCATTAT
TCAGAGCGAGTATGGAGCAGAAACGATTGCAGGGTTTCACCAGGATCCACCTCTGATGTTCACTGAAGAG
TACCAGAAAAGTCTGCTAGAGCAGTACCATCTGGGTCTGGATCAAAAACGCAGAAAATACGTGGTTGGAG
AGCTCATTTGGAATTTTGCCGATTTCATGACTGAACAGTCACCGACGAGAGTGCTGGGGAATAAAAAGGG
GATCTTCACTCGGCAGAGACAACCAAAAAGTGCAGCGTTCCTTTTGCGAGAGAGATACTGGAAGATTGCC
AATGAAACCAGGTATCCCCACTCAGTAGCCAAGTCACAATGTTTGGAAAACAGCCTGTTTACT

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

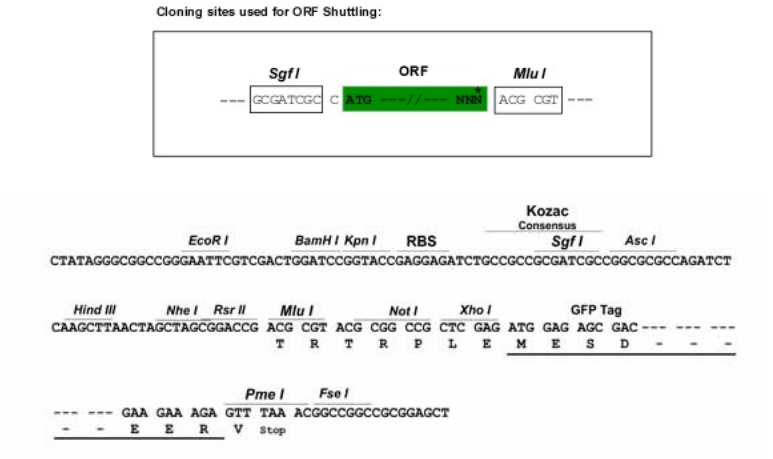
>RG204325 representing NM_000181
Red=Cloning site Green=Tags(s)

MARGSAVAWAALGPLLWGCALGLQGGMLYPQESPSRECKELDGLWSFRADFSDNRRRGFEEQWYRRPLWE
SGPTVDMPVPSSFNDISQDWRLRHFVGWVWYEREVILPERWTQDLRTRVVLRIGSAHSYAIVWVNGVDTL
EHEGGYLPFEADISNLVQVGPLPSRLRITIAINNTLTPTTLPPGTIQYLTDTSKYPKGYFVQNTYFDFFN
YAGLQRSVLLYTTPTTYIDDITVTTSVEQDSGLVNYQISVKGSNLFKLEVRLLDAENKVVANGTGTQGQL
KVPGVSLWWPYLMHERPAYLYSLEVQLTAQTSLGPVSDFYTLPVGIRTVAVTKSQFLINGKPFYFHGVNK
HEDADIRGKGFDWPLLVKDFNLLRWLGANAFRTSHYPYAEEVMQMCDRYGIVVIDECPGVGLALPQFFNN
VSLHHHMQVMEEVVRRDKNHPAVVMWSVANEPASHLESAGYYLKMVIAHTKSLDPSRPVTFVSNSNYAAD
KGAPYVDVICLNSYYSWYHDYGHLELIQLQLATQFENWYKKYQKPIIQSEYGAETIAGFHQDPPLMFTEE
YQKSLLEQYHLGLDQKRRKYVVGELIWNFADFMTEQSPTRVLGNKKGIFTRQRQPKSAAFLLRERYWKIA
NETRYPHSVAKSQCLENSLFT

TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_000181

ORF Size: 1953 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:
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_000181.4

RefSeq Size: 2245 bp

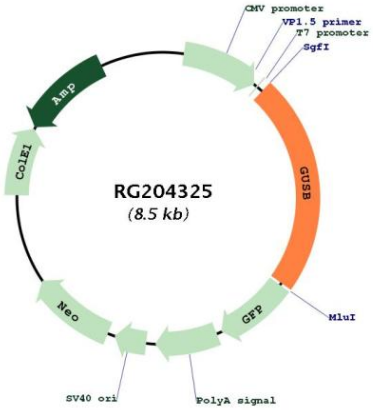
RefSeq ORF: 1956 bp

Locus ID: 2990

UniProt ID: P08236

Cytogenetics:	7q11.21
Domains:	Glyco_hydro_2, Glyco_hydro_2_C, Glyco_hydro_2_N
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
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]

Product images:



Circular map for RG204325