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Product datasheet for RG216918

Collagen VI (COL6A3) (NM_057164) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Collagen VI (COL6A3) (NM_057164) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	COL6A3
Synonyms:	BTHLM1; DYT27; UCMD1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)

ORF Nucleotide Sequence:

>RG216918 representing NM_057164
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGAGGAAACATCGGCACTTGCCCTTAGTGGCCGTCTTTTGCCTCTTTCTCTCAGGCTTTCCTACAACTC
ATGCCCAGCAGCAGCAAGCAGTCATTGAAGTCAACAAGAGAGACATAGTCTTCCTGGTGGATGGCTCATC
TGCACTGGGACTGGCCAACTTCAATGCCATCCGAGACTTCATTGCTAAAGTCATCCAGAGGCTGGAAATC
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AATTGCGGTGGCTCAGTACAGCGATGATGTCAAGGTGGAGTCCCGTTTTGATGAGCACCAGAGTAAGCCT

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GAGATCCTGAATCTTGTGAAGAGAATGAAGATCAAGACGGGCAAAGCCCTCAACCTGGGCTACGCGCTGG
ACTATGCACAGAGGTACATTTTTGTGAAGTCTGCTGGCAGCCGGATCGAGGATGGAGTGCTTCAGTTCCT
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GTGTTCTCGGTGAGCACCTTCCGGGAGCTGCCCAGCCTGGAGCAGAAACTGCTGACGCCCATCACGACCC
TGACCTCAGAGCAGATCCAGAAGCTCTTAGCCAGCACTCGCTATCCACCTCCAGGTGAGATGGGGGCGTC
GGAGGTTCTCCTTGGAGCATTTTCCATA

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

>RG216918 representing NM_057164
Red=Cloning site Green=Tags(s)

MRKHRHLPLVAVFCLFLSGFPTTHAQQQQAVIEVNKRDIVFLVDGSSALGLANFNAIRDFIAKVIQRLEI
GQDLIQVAVAQYADTVRPEFYFNTHPTKREVITAVRKMKPLDGSALYTGSALDFVRNNLFTSSAGYRAAE
GIPKLLVLITGGKSLDEISQPAQELKRSSIMAFAIGNKGADQAELEEIAFDSSLVFIPAEFRAAPLQGML
PGLLAPLRTLSGTPEVHSNKRDIIFLLDGSANVGKTNFPYVRDFVMNLVNSLDIGNDNIRVGLVQFSDTP
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EILNLVKRMKIKTGKALNLGYALDYAQRYIFVKSAGSRIEDGVLQFLVLLVAGRSSDRVDGPASNLKQSG
VVPFIFQAKNADPAELEQIVLSPAFILAAESLPKIGDLHPQIVNLLKSVHNGAPAPVSGEKDVVFLLDGS
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TGAALEFVLRNILVSSAGSRITEGVPQLLIVLTADRSGDDVRNPSVVVKRGGAVPIGIGIGNADITEMQT
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FQYVRTLIERLVDYLDVGFDTTRVAVIQFSDDPKVEFLLNAHSSKDEVQNAVQRLRPKGGRQINVGNALE
YVSRNIFKRPLGSRIEEGVPQFLVLISSGKSDDEVDDPAVELKQFGVAPFTIARNADQEELVKISLSPEY
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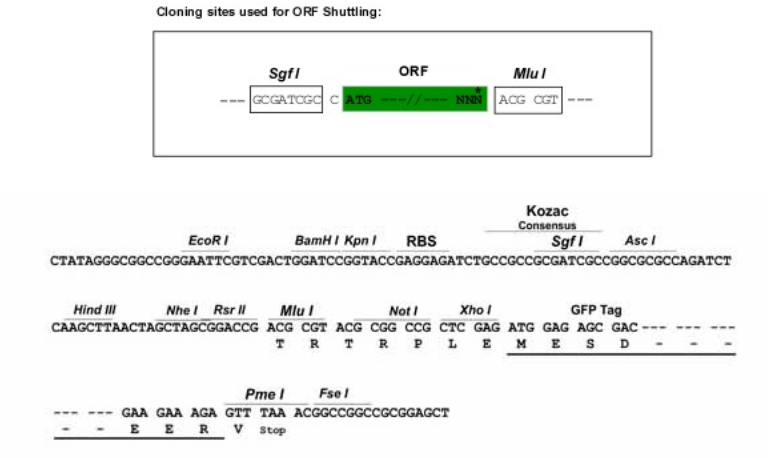
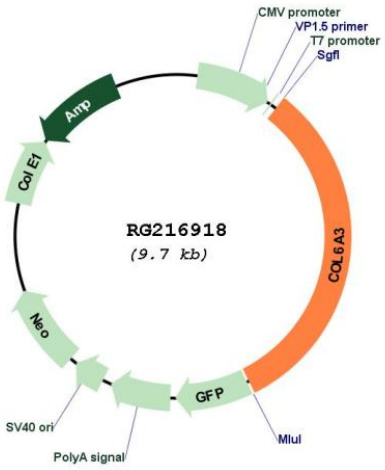
TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:



Plasmid Map:



ACCN: NM_057164

ORF Size: 3108 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_057164.5
RefSeq Size:	3485 bp
RefSeq ORF:	3111 bp
Locus ID:	1293
UniProt ID:	P12111
Cytogenetics:	2q37.3
Protein Families:	Druggable Genome
Protein Pathways:	ECM-receptor interaction, Focal adhesion
Gene Summary:	This gene encodes the alpha-3 chain, one of the three alpha chains of type VI collagen, a beaded filament collagen found in most connective tissues. The alpha-3 chain of type VI collagen is much larger than the alpha-1 and -2 chains. This difference in size is largely due to an increase in the number of subdomains, similar to von Willebrand Factor type A domains, that are found in the amino terminal globular domain of all the alpha chains. These domains have been shown to bind extracellular matrix proteins, an interaction that explains the importance of this collagen in organizing matrix components. Mutations in the type VI collagen genes are associated with Bethlem myopathy, a rare autosomal dominant proximal myopathy with early childhood onset. Mutations in this gene are also a cause of Ullrich congenital muscular dystrophy, also referred to as Ullrich scleroatonic muscular dystrophy, an autosomal recessive congenital myopathy that is more severe than Bethlem myopathy. Multiple transcript variants have been identified, but the full-length nature of only some of these variants has been described. [provided by RefSeq, Jun 2009]