

Product datasheet for **RG218936**

ITGA8 (NM_003638) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	ITGA8 (NM_003638) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	ITGA8
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG218936 representing NM_003638 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGTCGCCCGGGGCCAGCCCGGGTCCCCGGGAAGCCAGGCGCCGCTGATCGGCCCCCTCTGCTGCGCCG
CGGCCGCGCTGGGGATGTTGCTGTGGTCCCCGCTGTGACGGCTTCAACCTGGACGTGGAAAAGCTCAC
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CTTGATGGCAGAGGTGCAATTAGATTCCCTGAAACAGAAAGGAGCTATTAACGGACGCTCTTCCTTGAT
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ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTTAA

Protein Sequence:

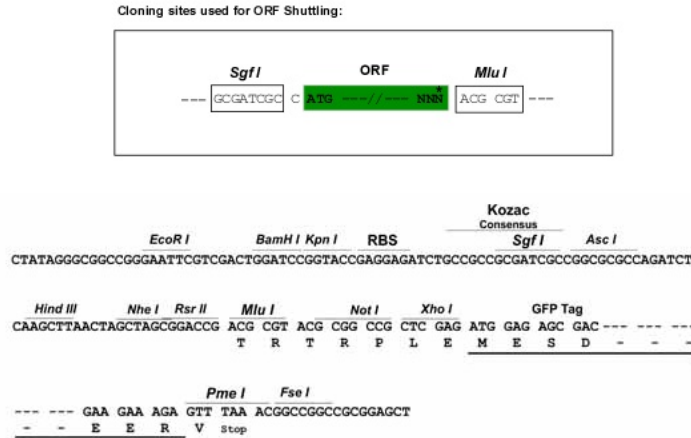
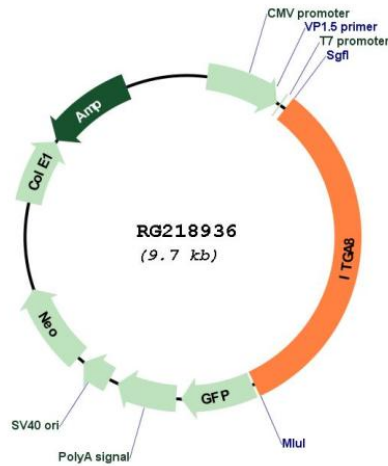
>RG218936 representing NM_003638
 Red=Cloning site Green=Tags(s)

MSPGASRGPGRSQAPLIAPLCCAAAALGMLLWSPACQAFNLDVEKLTVYSGPKGSYFGYAVDFHDPDART
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 KAHKGVVACAPLYHWRTLKPTPEKDPVGTCTYVAIQNFSAYAEFSPCRNSNADPEGQGYCQAGFLDFYK
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 NHQAHRVFPLVIKRQKSHQCQDFIVYLRDETEFRDKLSPINISLNYSLDESTFKEGLEVKPILNYYRENI
 VSEQAHLVDCGEDNLCVPLKLSARPDKHQVIIGDENHMLMIINARNEGEGAYEAELFVMIPEEADYVG
 IERNKGFRLSCEYKMENVTRMVVCDLGNPMVSGTNYSLGLRFVPRLEKTNMSINFDLQIRSSNKNPN
 DSNFVSLQINITAVAQVEIRGVSHPPQIVLPIHNWEPEEPHKEEEVGPLVEHIYELHNIIPSTISDITIL
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 VEFHRQSPAKILNCTNIECLQISCAVGRLEGESAVLKVRSRLWAHTFLQRKNDPYALASLVSFEVKKMP
 YTDQPAKLPEGSIAIKTSVIWATPNVVSFIPLWVILAILLGLLVLAILTLALWKCFFDRARPPQEDMT
 DREQLTNDKTPEA

TRTRPLE – GFP Tag – V

Restriction Sites:

SgfI-MluI

Cloning Scheme:

Plasmid Map:


ACCN: NM_003638

ORF Size: 3189 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_003638.1 , NP_003629.1
RefSeq Size:	3261 bp
RefSeq ORF:	3192 bp
Locus ID:	8516
UniProt ID:	P53708
Cytogenetics:	10p13
Protein Families:	Druggable Genome, Transmembrane
Protein Pathways:	Arrhythmogenic right ventricular cardiomyopathy (ARVC), Cell adhesion molecules (CAMs), Dilated cardiomyopathy, ECM-receptor interaction, Focal adhesion, Hypertrophic cardiomyopathy (HCM), Regulation of actin cytoskeleton
Gene Summary:	Integrins are heterodimeric transmembrane receptor proteins that mediate numerous cellular processes including cell adhesion, cytoskeletal rearrangement, and activation of cell signaling pathways. Integrins are composed of alpha and beta subunits. This gene encodes the alpha 8 subunit of the heterodimeric integrin alpha8beta1 protein. The encoded protein is a single-pass type 1 membrane protein that contains multiple FG-GAP repeats. This repeat is predicted to fold into a beta propeller structure. This gene regulates the recruitment of mesenchymal cells into epithelial structures, mediates cell-cell interactions, and regulates neurite outgrowth of sensory and motor neurons. The integrin alpha8beta1 protein thus plays an important role in wound-healing and organogenesis. Mutations in this gene have been associated with renal hypodysplasia/aplasia-1 (RHDA1) and with several animal models of chronic kidney disease. Alternate splicing results in multiple transcript variants encoding distinct isoforms. [provided by RefSeq, Apr 2014]