

## Product datasheet for RC201151

### Integrin alpha 5 (ITGA5) (NM\_002205) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Integrin alpha 5 (ITGA5) (NM_002205) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Integrin alpha 5
Synonyms:	CD49e; FNRA; VLA-5; VLA5A
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC201151 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGGGGAGCCGGACGCCAGAGTCCCCTCTCCACGCCGTGCAGCTGCGCTGGGGCCCCGGCGCCGACCCC  
CGCTGCTGCCGTGCTGTTGCTGCTGCTGCCGCCACCCAGGGTGGGGGCTTCAACTTAGACCGGGA  
GGCCCCAGCAGTACTCTCGGGGCCCGGGCTCCTTCTCGGATTCTCAGTGGAGTTTACCGGCCGGGA  
ACAGACGGGGTCACTGTGCTGGTGGGAGCACCAAGGCTAATACCAGCCAGCCAGGAGTGTGCAGGGTG  
GTGCTGTCTACCTCTGCTTGGGGTCCAGCCCCACACAGTGCACCCCCATTGAATTTGACAGCAAAGG  
CTCTCGGCTCCTGGAGTCTCACTGTCCAGCTCAGAGGGAGAGGAGCCTGTGGAGTACAAGTCTTGCAG  
TGGTTCGGGGCAACAGTTCGAGCCCATGGCTCCTCCATCTTGGCATGCGCTCCACTGTACAGCTGGCGCA  
CAGAGAAGGAGCCACTGAGCGACCCCGTGGGCACCTGCTACCTCTCCACAGATAACTTACCCGAATTCT  
GGAGTATGCACCCCTGCCGCTCAGATTTAGCTGGGCAGCAGGACAGGGTTACTGCCAAGGAGGCTTCACT  
GCCGAGTTCACCAAGACTGGCCGTGTGGTTTTAGGTGGACCAGGAAGCTATTTCTGGCAAGGCCAGATCC  
TGTCTGCCACTCAGGAGCAGATTGCAGAATCTTATTACCCGAGTACCTGATCAACCTGGTTCAGGGGCA  
GCTGCAGACTCGCCAGGCCAGTTCCATCTATGATGACAGCTACCTAGGATACTCTGTGGCTGTTGGTGAA  
TTCAGTGGTGATGACACAGAAGACTTTGTTGCTGGTGTGCCAAAGGGAACCTCACTTACGGCTATGTCA  
CCATCCTTAATGGCTCAGACATTGATCCCTCTACAACCTCTCAGGGGAACAGATGGCCTCTACTTTGG  
CTATGCAGTGGCCGCCACAGACGTCAATGGGGACGGGCTGGATGACTTGTGGTGGGGGACCCCTGCTC  
ATGGATCGGACCCCTGACGGGCGGCTCAGGAGGTGGCAGGGTCTACGTCTACCTGCAGACCCAGCCG  
GCATAGAGCCACGCCACCCCTTACCCTCACTGGCCATGATGAGTTTGGCCGATTTGGCAGCTCCTTGAC  
CCCCCTGGGGGACCTGGACCAGGATGGTACAATGATGTGGCCATCGGGGCTCCCTTTGGTGGGGAGACC  
CAGCAGGGAGTAGTGTGTTGATTTCTGGGGGCCAGGAGGGCTGGGCTTAAGCCTTCCAGGTTCTGC  
AGCCCCGTGGGCAGCCAGCCACACCCAGACTTCTTTGGCTCTGCCCTTCGAGGAGGCCGAGACCTGGA  
TGCAATGGATATCCTGATCTGATTGTGGGCTCCTTTGGTGTGGACAAGGCTGTGGTATACAGGGGCCG



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CCCATCGTGTCCGCTAGTGCCTCCCTCACCATCTTCCCGCCATGTTCAACCCAGAGGAGCGGAGCTGCA  
 GCTTAGAGGGGAACCTGTGGCCTGCATCAACCTAGCTTCTGCCTCAATGCTTCTGAAAAACAGTTGC  
 TGA CTCCATTGGTTTACAGTGGAACTTCACTGGACTGGCAGAAAGCAGAAAGGGAGGGTACGGCGGCA  
 CTGTTCTGGCCTCCAGGCAGGCAACCTGACCCAGACCTGCTCATCCAGAATGGGGCTCGAGAGGATT  
 GCAGAGAGATGAAGATCTACCTCAGGAACGAGTCAGAAATTCGAGACAACTCTCGCCGATTACATCGC  
 TCTCAACTTCTCCTTGGACCCCAAGCCCCAGTGGACAGCCACGGCCTCAGGCCAGCCCTACATTATCAG  
 AGCAAGAGCCGGATAGAGGACAAGGCTCAGATCTTGGTGGACTGTGGAGAAGACAACATCTGTGTGCCTG  
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 CCTGCACCACAGCAAAAACGGGAAGCTCCAAGCCGAGCTCTGCTTCTCGGGACCTCAGATCTGAAA  
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 CAGGTGGCCACAGCTGTCAATGGACCAAGGCAGAAGGCAGCTATGGCGTCCACTGTGGATCATCATCC  
 TAGCCATCCTGTTTGGCCTCCTGCTCCTAGGTCTACTCATCTACATCCTCTACAAGCTTGGATTCTCAA  
 ACGCTCCCTCCATATGGCACCCCATGAAAAAGCTCAGCTCAAGCCTCCAGCCACCTCTGATGCC

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>RC201151 protein sequence  
 Red=Cloning site Green=Tags(s)

MGSRTPE SPLHAVQLRWGPRRRPPLPLLLLLLPPPPRVGGFNLDAEAPAVLSGPPGSFFGFSVEFYRPG  
 TDGVSVLV GAPKANTSQPGVLQGGAVYLC PWGASPTQCTPIEFDSKGRLLLESSLSSSEGEPEVEYKSLQ  
 WFGATVRAHGSSILACAPLYSWRTEKEPLSDPVGTCYLSTDNFTRILEYAPCRSDFSWAAGQGYCQGGFS  
 AEFKTKGRVVLGGPGSYFWQQILSATQEQIAESYYPEYLINLVQGLQTRQASSIYDSSYLGYSVAVGE  
 FSGDDTEDFVAGVPKGNLTYGYVTILNGSDIRSLYNFSGEQMASYFGYAVAATDVNGDGLDLLVGAPLL  
 MDRTPDGRPQEVGRVYVYLQHPAGIEPTPTLTLTG HDEFGRFGSSLTPLGDLQDGYNDVAIGAPFGGET  
 QQGVVVFVFPGGPGLGSKPSQVLQPLWAASHTPDDFFGSALRGG RDL DNGY PDLIVGSFGVDKAVVYRGR  
 PIVSASASLTIFPAMFNPEERSCSLEGNPVACINLSFCLNASGKHVADSI GFTVELQLDWQKQKGGVRRR  
 LFLASRQATLTQTLLIQNGAREDCREMKIYLRNESEFRDKLSPIHIALNFS LDPQAPVDSHGLR PALHYQ  
 SKSRIEDKAQILLDCGEDNICVPDLQLEVFGEQNHVYLGDKNALNLTFHAQNVGEGGAYEAE LRVTAPE  
 AEYSGLVRHPGNFSSLS CDYFAVNQSRLVCDLGNPMKAGASLWGLRFTVPHLRDTKKTIQDFQILSK  
 NLNNSQSDVVSFRLSVEAQAQVTLNGVSKPEAVLFPVSDWHPRDQPQKEEDLGP AVHHVYELINQGPSSI  
 SQGVLELSCPQALEGQQLLYVTRVTGLNCTTNHPINPKGLELDPEGSLHHQKREAPSRSSASSGPQILK  
 CPEAECFRLRCELGPLHQEQESQLLHFRVWAKTFLQREHQPFSLQCEAVYKALKMPYRILPRQLPQKER  
 QVATAVQWTKAEGSYGVPLWIIILAILFGLLLLGLLIYILYKLGFFKRSLPYGTAMEKAQLKPPATSDA

TRTRPLEQKLI SEEDLAANDILDYKDDDDKV

**Chromatograms:**

[https://cdn.origene.com/chromatograms/mk6156\\_e01.zip](https://cdn.origene.com/chromatograms/mk6156_e01.zip)

**Restriction Sites:**

Sgfl-Mlul

**Cloning Scheme:**


**ACCN:** NM\_002205

**ORF Size:** 3147 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.

**Note:** Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

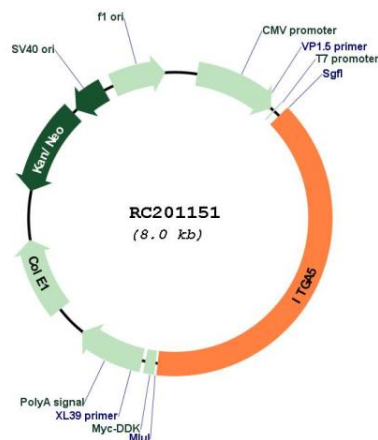
**RefSeq:** [NM\\_002205.5](#)

**RefSeq Size:** 4267 bp

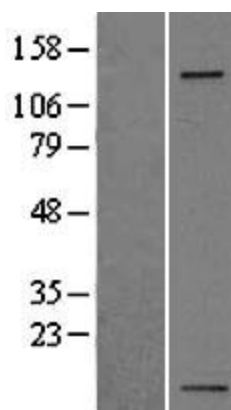
**RefSeq ORF:** 3150 bp

**Locus ID:** 3678  
**UniProt ID:** [P08648](#)  
**Cytogenetics:** 12q13.13  
**Domains:** FG-GAP  
**Protein Families:** Druggable Genome, ES Cell Differentiation/IPS, Transmembrane  
**Protein Pathways:** Arrhythmogenic right ventricular cardiomyopathy (ARVC), Dilated cardiomyopathy, ECM-receptor interaction, Focal adhesion, Hematopoietic cell lineage, Hypertrophic cardiomyopathy (HCM), Regulation of actin cytoskeleton  
**MW:** 114.5 kDa  
**Gene Summary:** The product of this gene belongs to the integrin alpha chain family. Integrins are heterodimeric integral membrane proteins composed of an alpha subunit and a beta subunit that function in cell surface adhesion and signaling. The encoded preproprotein is proteolytically processed to generate light and heavy chains that comprise the alpha 5 subunit. This subunit associates with the beta 1 subunit to form a fibronectin receptor. This integrin may promote tumor invasion, and higher expression of this gene may be correlated with shorter survival time in lung cancer patients. Note that the integrin alpha 5 and integrin alpha V subunits are encoded by distinct genes. [provided by RefSeq, Oct 2015]

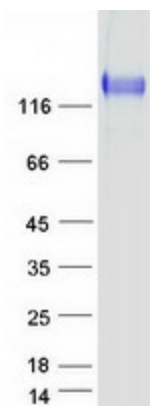
### Product images:



Circular map for RC201151



Western blot validation of overexpression lysate (Cat# [LY400803]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC201151 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified ITGA5 protein (Cat# [TP301151]). The protein was produced from HEK293T cells transfected with ITGA5 cDNA clone (Cat# RC201151) using MegaTran 2.0 (Cat# [TT210002]).