

Product datasheet for RC221297

CD11a (ITGAL) (NM_002209) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	CD11a (ITGAL) (NM_002209) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	ITGAL
Synonyms:	CD11A; LFA-1; LFA1A
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin
ORF Nucleotide Sequence:	>RC221297 representing NM_002209 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**GCGATCGCC**

ATGAAGGATTCCTGCATCACTGTGATGGCCATGGCGCTGCTGTCTGGTCTTTTTCTTCGCGCCGGCT
CGAGCTACAACCTGGACGTGCGGGCGCGGGAGCTTCTCCACCGCGCCGGGAGGCACCTTTGGATA
CCGCGTCTGCAGGTCGAAACGGGGTCATCGTGGGAGCTCCAGGGGAGGGGAACAGCACAGGAAGCCTC
TATCAGTGCCAGTCGGGCACAGGACACTGCCTGCCAGTACCCTGAGAGGTTCCAACATACCTCCAAGT
ACTTGGGAATGACCTTGGCAACAGACCCACAGATGGAAGCATTTTGGCCTGTGACCCTGGGCTGTCTCG
AACGTGTGACCAGAACACCTATCTGAGTGGCCTGTGTTACCTCTTCGCCAGAATCTGCAGGGTCCCATG
CTGCAGGGGCGCCCTGGTTTTAGGAATGTATCAAGGGCAACGTAGACCTGGTATTTCTGTTGATGGTT
CGATGAGCTTGCAGCCAGATGAATTTAGAAAATCTGGACTTCATGAAGGATGTGATGAAGAACTCAG
CAACACTTCGTACCAGTTTGTCTGCTGTTCCAGATTTCCACAAGCTACAAAACAGAATTTGATTTCTCAGAT
TATGTTAAACGGAAGGACCCTGATGCTCTGCTGAAGCATGTAAGCACATGTTGCTGTTGACCAATACCT
TTGGTGCCATCAATTATGTCGCGACAGAGGTGTTCCGGGAGGAGCTGGGGGCCCGCCAGATGCCACCAA
AGTGCTTATCATCATCACGGATGGGGAGGCCACTGACAGTGGCAACATCGATGCGGCCAAAGACATCATC
CGCTACATCATCGGGATTGAAAAGCATTTTCAGACCAAGGAGAGTCAGGAGACCTCCACAAATTTGCAT
CAAAACCCGCGAGCGAGTTTGTGAAAATCTGGACACATTTGAGAAGCTGAAAGATCTATTCAGTACGCT
GCAGAAGAAGATCTATGTCATTGAGGGCACAAGCAAACAGGACCTGACTTCTTCAACATGGAGCTGTCC
TCCAGCGGCATCAGTCTGACCTCAGCAGGGGCCATGCAGTCTGGGGCAGTAGGAGCCAAGGACTGGG
CTGGGGCTTTCTTGACCTGAAGGCAGACCTGCAGGATGACACATTTATTGGGAATGAACCATTGACACC
AGAAGTGAGAGCAGGCTATTTGGGTTACACCGTGACCTGGCTGCCCTCCCGGCAAAGACTTCGTTGCTG
GCCTCGGGAGCCCTCGATACCAGCACATGGGCCAGATTGGCTCTATTTCCGGTGGGGAGCTGTGTGGCGT
CGACGTGGACCAAGATGGGGAGACAGAGCTGCTGCTGATTGGTGGCCCACTGTTCTATGGGGAGCAGAGA
GGAGGCCGGGTGTTTATCTACCAGAGAAGACAGTTGGGGTTTGAAGAAGTCTCAGAGCTGCAGGGGGACC



CCGGCTACCCACTCGGGCGGTTTGGAGAAGCCATCACTGCTCTGACAGACATCAACGGCGATGGGCTGGT
AGACGTGGCTGTGGGGCCCTCTGAGGAGCAGGGGGCTGTGTACATCTTCAATGGGAGGCACGGGGG
CTTAGTCCCAGCCAAGTCAGCGGATAGAAGGGACCAAGTGCTCTCAGGAATTCAGTGGTTTGGACGCT
CCATCCATGGGGTGAAGGACCTTGAAGGGGATGGCTTGGCAGATGTGGCTGTGGGGGCTGAGAGCCAGAT
GATCGTGTGAGCTCCCGCCCTGGTGGATATGGTACCCTGATGTCTTCTCAGCTGAGATCCCA
GTGCATGAAGTGGAGTGTCTATTCAACCAGTAACAAGATGAAAGAAGGAGTTAATATCACAATCTGTT
TCCAGATCAAGTCTCTCATCCCCAGTTCCAAGGCCCTGGTTGCCAATCTCACTTACACTCTGCAGCT
GGATGGCCACCGGACCAGAAGACGGGGTGTTCAGGAGGGAGACATGAACTCAGAAGGAATATAGCT
GTCACCACCAGCATGTGCTGCACTGACTTCTCATTTCATTTCCCGGTATGTGTTCAAGACCTCATCTCCC
CCATCAATGTTTTCCCTGAATTTCTCTTTGGGAGGAGGAAGGGACACCGAGGGACAAAGGGCGCAGGG
CAAGGACATACCGCCATCCTGAGACCCTCCTGCACTCGAAACCTGGGAGATCCCTTTTGAAGAAGC
TGTGGGGAGGACAAGAAGTGTGAGGCAAACTTGAGAGTGTCTTCTCCTGCAAGATCCAGAGCCCTGC
GTCTAACTGCTTTGCCAGCCTCTCTGTGGAGCTGAGCCTGAGTAACTTGAAGAAGATGCTTACTGGGT
CCAGCTGGACCTGCACTTCCCCCGGGACTCTCCTTCCGCAAGGTGGAGATGCTGAAGCCCCATAGCCAG
ATACCTGTGAGCTGCGAGGAGCTTCTGAAGAGTCCAGGCTTCTGTCCAGGGCATTATCTTGCAATGTGA
GCTCTCCCATCTTCAAAGCAGGCCACTCGGTTGCTCTGCAGATGATGTTAATACACTGGTAAACAGCTC
CTGGGGGACTCGGTTGAATTGCACGCCAATGTGACCTGTAACAATGAGGACTCAGACCTCCTGGAGGAC
AACTCAGCCACTACCATCATCCCCATCCTGTACCCCATCAACATCCTCATCCAGGACCAAGAAGACTCCA
CACTCTATGTGAGTTTCACCCCAAAGGCCCAAGATCCACCAAGTCAAGCACATGTACCAGGTGAGGAT
CCAGCCTTCCATCCACGACCACAACATACCCACCCTGGAGGCTGTGGTTGGGGTGCCACAGCCTCCCAGC
GAGGGGCCCATCACACACCAGTGGAGCGTGCAGATGGAGCCTCCCGTGCCTGCCACTATGAGGATCTGG
AGAGGCTCCCGGATGCAGCTGAGCCTTGTCTCCCGGAGCCCTGTTCCGCTGCCCTGTTGTCTTCAGGCA
GGAGATCCTCGTCCAAGTGCAGCTCGGGACTCTGGAGCTGGTGGGAGAGATCGAGGCCCTTCCATGTTGAGC
CTCTGCAGCTCCCTCTCCATCTCCTTCAACAGCAGCAAGCATTTCACCTCTATGGCAGCAACGCCTCCC
TGGCCCAGGTTGTCATGAAGTTGACGTGGTGTATGAGAAGCAGATGCTCTACCTCTACGTGCTGAGCGG
CATCGGGGGCTGCTGCTGCTGCTCATTTCATAGTGTGTACAAGTTGGTTTCTTCAAACGGAAC
CTGAAGGAGAAGATGGAGGCTGGCAGAGGTGTCCGAAATGGAATCCCTGCAGAAGACTCTGAGCAGCTGG
CATCTGGGCAAGAGGCTGGGGATCCCGGCTGCCTGAAGCCCTCCATGAGAAGGACTCTGAGAGTGGTGG
TGGCAAGGAC

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >RC221297 representing NM_002209
 Red=Cloning site Green=Tags(s)

```

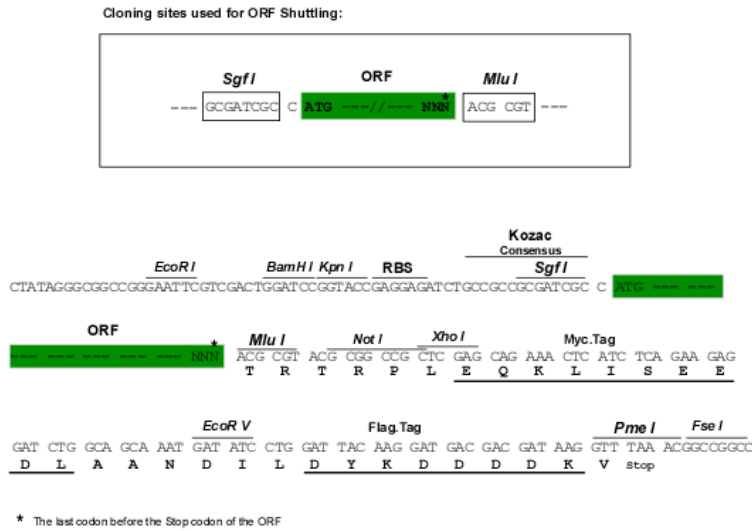
MKDSCITVMAMALLSGFFFFAPASSYNLDVRGARSFSPPRAGRHFgyrvlqvngvIVGAPGEGNSTGSL
YQCQSGTGHCLPVTLRGSNYTSKYLGMTLATDPTDGSILACDPGLSRTCDQNTYLSGLCYLFRQNLQGPM
LQGRPGFQECIKGNVDL VFLFDGSMSLQPDFQKILDFMKDVMKKLSNTSYQFAAVQFSTSYKTEFDFSD
YVKRKDPDALLKHVKHMLLLTNTFGAINYVATEVFREELGARPDAKTVLIIITDGEATDSGNIDAAKDII
RYIIGIGKHFQTKESQETLHKFASKPASEFVKILDTFEKLDLFTLQKKIYVIEGTSKQDLTSFNMELS
SSGISADLSRGHAVVGAVGAKDWAGGFLDLKADLQDDTFIGNPLTPEVRAGYLGYTVTWPSPRQKTSLL
ASGAPRYQHMGRVLLFQEPQGGGHSVQVQTIHGTQIGSYFGGELCGVDVDQDGETELLLIGAPLFYGEQR
GGRVFIYQRRQLGFEVSELQGDPGYPLGRFGEAITALTDINGDGLVDVAVGAPLEEQAVYIFNGRHGG
LSPQPSQRIEGTQVLSGIQWFGRSIHGVKDLGEGDLADVAVGAESQMIVLSSRPVDMVMTLSMSPAEP
VHEVECSYSTSNKMKKEGVNITICFQIKSLIPQFQGRLVANLTYTLQLDGHRTRRRGLFPGGRHELRRNIA
VTTSMSCDTSFHFVPCVDLISPINVSLSLWEEEGTPRDQRAQGDIPPILRPSLHSETWEIPFEKN
CGEDKKCEANLRVSFSPARSRALRLTAFASLSVELSLSNLEEDAYWVQLDLHFPPGLSFRKVEMLKPHSQ
IPVSCEELPEESRLLSRALSCNVSSPIFKAGHSVALQMMFNTLVNSSWGDVSELHANVTCNNEDSLLLED
NSATTIIPILYINILIQDQEDSTLYVSFTPKGPKIHQVKHMYQVRIQPSIHDHNIPTLEAVVGVQPPS
EGPITHQWSVQMEPPVPCHYEDLERLPDAAEPCPLPGALFRCPVFRQEILVQVIGTLELVGEIEASSMFS
LCSSLISIFNSSKHFLYGSNASLAQVVMKVDVYVEKQMLYLVLVSGIGGLLLLLLIFIVLYKVGFFKRN
LKEKMEAGRGVNPNGIPAEDSEQLASGQEAQDPGCKLPLHEKDSSESGGKD
  
```

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

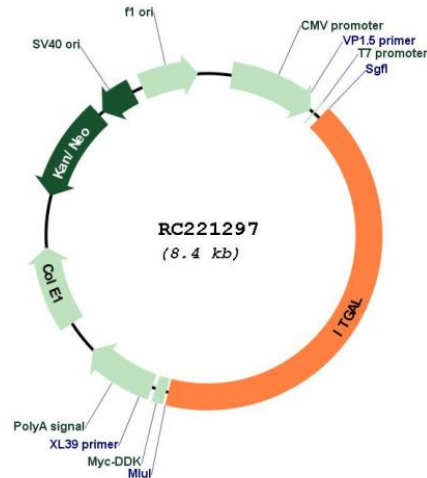
Chromatograms: https://cdn.origene.com/chromatograms/mg2667_b01.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



Plasmid Map:



ACCN: NM_002209

ORF Size: 3510 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_002209.3](#)

RefSeq Size: 5133 bp

RefSeq ORF: 3513 bp

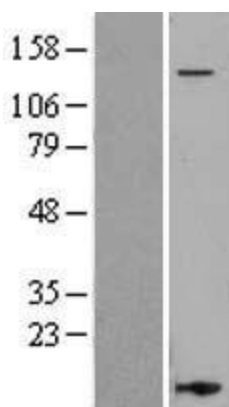
Locus ID: 3683

UniProt ID: [P20701](#)

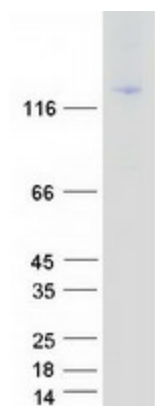
Cytogenetics: 16p11.2

Protein Families:	Druggable Genome, ES Cell Differentiation/IPS, Transmembrane
Protein Pathways:	Cell adhesion molecules (CAMs), Leukocyte transendothelial migration, Natural killer cell mediated cytotoxicity, Regulation of actin cytoskeleton, Viral myocarditis
MW:	128.77 kDa
Gene Summary:	ITGAL encodes the integrin alpha L chain. Integrins are heterodimeric integral membrane proteins composed of an alpha chain and a beta chain. This I-domain containing alpha integrin combines with the beta 2 chain (ITGB2) to form the integrin lymphocyte function-associated antigen-1 (LFA-1), which is expressed on all leukocytes. LFA-1 plays a central role in leukocyte intercellular adhesion through interactions with its ligands, ICAMs 1-3 (intercellular adhesion molecules 1 through 3), and also functions in lymphocyte costimulatory signaling. Two transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Jul 2008]

Product images:



Western blot validation of overexpression lysate (Cat# [LY400809]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC221297 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified ITGAL protein (Cat# [TP321297]). The protein was produced from HEK293T cells transfected with ITGAL cDNA clone (Cat# RC221297) using MegaTran 2.0 (Cat# [TT210002]).