

Product datasheet for **RC206453**

CD4 (NM_000616) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	CD4 (NM_000616) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	CD4
Synonyms:	CD4mut; IMD79; OKT4D
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>RC206453 ORF sequence
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGAACCGGGGAGTCCCTTTTAGGCACTTGCTTCTGGTGTGCAACTGGCGCTCCTCCAGCAGCCACTC
 AGGAAAAGAAAGTGGTGTGCTGGGCAAAAAAGGGGATACAGTGGAAGTACCTGTACAGCTTCCAGAAAGAA
 GAGCATACAATCCACTGGAAAACTCCAACCAGATAAAGATTCTGGAAATCAGGGCTCCTTCTTAACT
 AAAGTCCATCCAAGCTGAATGATCGCGCTGACTCAAGAAGAAGCCTTTGGGACCAAGGAACTTTCCCC
 TGATCATCAAGAATCTTAAGATAGAAGACTCAGATACTTACATCTGTGAAGTGGAGGACCAGAAGGAGGA
 GGTGCAATTGCTAGTGTTCGGATTGACTGCCAAGTCTGACACCCACCTGCTTCAGGGGCAGAGCCTGACC
 CTGACCTTGGAGAGCCCCCTGGTAGTAGCCCTCAGTGAATGTAGGAGTCCAAGGGTAAAAACATAC
 AGGGGGGGAAGACCTCTCCGTGTCTCAGCTGGAGCTCCAGGATAGTGGCACCTGGACATGCACTGTCTT
 GCAGAACCAGAAGAAGGTGGAGTCAAAAATAGACATCGTGGTGTAGCTTCCAGAAGGCCTCCAGCATA
 GTCTATAAGAAAGAGGGGGAACAGGTGGAGTTCCTTCCCACTCGCCTTACAGTTGAAAAGCTGACGG
 GCAGTGGCGAGCTGTGGTGGCAGGCGGAGAGGGCTTCTCCTCCAAGTCTTGGATCACCTTTGACCTGAA
 GAACAAGGAAGTGTCTGTAAAACGGGTTACCCAGGACCCTAAGCTCCAGATGGGCAAGAAGCTCCCGCTC
 CACCTCACCTGCCCCAGGCCTTGCCCTCAGTATGCTGGCTCTGGAAACCTCACCTGGCCCTTGAAGCGA
 AAACAGGAAAGTTGCATCAGGAAGTGAACCTGGTGGTGTGAGAGCCACTCAGCTCCAGAAAAATTTGAC
 CTGTGAGGTGTGGGACCCACCTCCCCTAAGCTGATGCTGAGCTTGAAGTGGAGAACAAGGAGGCAAAG
 GTCTCGAAGCGGGAGAAGCGGTGTGGGTGCTGAACCTGAGCGGGGATGTGGCAGTGTCTGCTGAGTG
 ACTCGGGACAGGTCTGCTGGAATCCAACATCAAGTTCTGCCACATGGTCCACCCCGTGCAGCCAAT
 GGCCCTGATTGTGCTGGGGGGCTCGCCCGCTCCTGCTTTTCATTGGGCTAGGCATCTTCTTCTGTGTC
 AGGTGCCGGCACCGAAGGCGCAAGCAGAGCGGATGTCTCAGATCAAGAGACTCCTCAGTGAAGAAGA
 CCTGCCAGTGCCCTACCGGTTTCAAGAAGCATGTAGCCCAT

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC206453 protein sequence
 Red=Cloning site Green=Tags(s)

MNRGVPFRHLLLVLQLALLPAATQGKKVVLGKKGDTVELTCTASQKKSIIQFHWKNSNQIKILGNQGSFLT
 KGPSKLNDRADSRRLWDQGNFPLIIKNLKIEDSDTYICEVEDQKEEVQLLVFGLTANSDTHLLQGQSLT
 LTLESPPGSSPSVQCRSPRGKNIQGGKTLVSVQLELQDSGTWTCTVLQNKVVEFKIDIVVLAQKASSI
 VYKKEGEQVEFSFPLAFTVEKLTGSGELWWQAERASSKSWITFDLKNKEVSVKRVTDQPKLQMGKLLPL
 HLTLPQALPQYAGSGLTLALEAKTGKLGHEVNLVVMRATQLQKNLTCEVWGPTSPKMLMLSLKLENKEAK
 VSKREKAVVVLNPEAGMWQCLLSDSGVLLLESNIKVLPTWSTPVQPMALIVLGGVAGLLLFIGLGIFFCV
 RCRHRRRQAERMSQIKRLLSEKKTQCPhRFQKTCSP

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms:

https://cdn.origene.com/chromatograms/mk6016_a11.zip

Restriction Sites:

Sgfl-Mlul

Cloning Scheme:


ACCN: NM_000616

ORF Size: 1374 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_000616.2](#), [NP_000607.1](#)

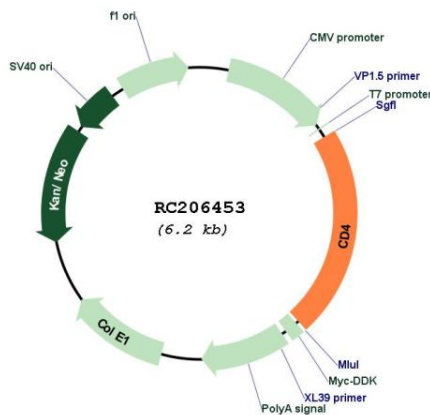
RefSeq Size: 3134 bp

RefSeq ORF: 1377 bp

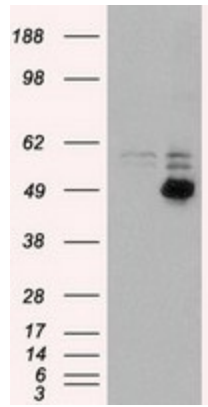
Locus ID: 920

UniProt ID:	<u>P01730</u>
Cytogenetics:	12p13.31
Domains:	ig, IGv, IGc2, IG
Protein Families:	Adult stem cells, Druggable Genome, ES Cell Differentiation/IPS, Induced pluripotent stem cells, Transmembrane
Protein Pathways:	Antigen processing and presentation, Cell adhesion molecules (CAMs), Hematopoietic cell lineage, Primary immunodeficiency, T cell receptor signaling pathway
MW:	51.1 kDa
Gene Summary:	This gene encodes the CD4 membrane glycoprotein of T lymphocytes. The CD4 antigen acts as a coreceptor with the T-cell receptor on the T lymphocyte to recognize antigens displayed by an antigen presenting cell in the context of class II MHC molecules. The CD4 antigen is also a primary receptor for entry of the human immunodeficiency virus through interactions with the HIV Env gp120 subunit. This gene is expressed not only in T lymphocytes, but also in B cells, macrophages, granulocytes, as well as in various regions of the brain. The protein functions to initiate or augment the early phase of T-cell activation, and may function as an important mediator of indirect neuronal damage in infectious and immune-mediated diseases of the central nervous system. Multiple alternatively spliced transcript variants encoding different isoforms have been identified in this gene. [provided by RefSeq, May 2020]

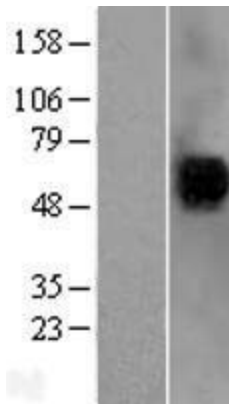
Product images:



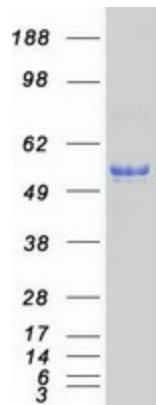
Circular map for RC206453



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY CD4 (Cat# RC206453, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-CD4 (Cat# [TA500477]). Positive lysates [LY400209] (100ug) and [LC400209] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY400209]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC206453 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified CD4 protein (Cat# [TP306453]). The protein was produced from HEK293T cells transfected with CD4 cDNA clone (Cat# RC206453) using MegaTran 2.0 (Cat# [TT210002]).