

Product datasheet for RC218764

HLA-DRB1 (NM_002124) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	HLA-DRB1 (NM_002124) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	HLA-DRB1
Synonyms:	DRB1; HLA-DR1B; HLA-DRB; SS1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC218764 representing NM_002124. Blue=ORF Red=Cloning site Green=Tag(s)

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GCTCGTTTAGTGAACCGTCAGAATTTTGTAAACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTG
GATCCGGTACCGAGGAGATCTGCCGCCGCGATCGCC
ATGGTGTGTCTGAAGCTCCCTGGAGGCTCCTGCATGACAGCGCTGACAGTGACACTGATGGTGCTGAGC
TCCCCACTGGCTTTGTCTGGGGACACCCGACCAGTTTCTGTGGCAGCCTAAGAGGGAGTGTCATTTT
TTCAATGGGACGGAGCGGGTCCGGTTCCTGGACAGATACTTCTATAACCAGGAGGAGTCCGTGCCCTTC
GACAGCGACGTGGGGGAGTTCGGGGCGGTGACGGAGCTGGGGCGCCTGACGCTGAGTACTGGAACAGC
CAGAAGGACATCCTGGAGCAGGCGGGCCGGTGGACACCTACTGCAGACACAACACGGGGTTGTG
GAGAGTTCACAGTGCAGCGCGAGTCCAACCTAAGGTGACTGTATATCCTTCAAAGACCCAGCCCTG
CAGCACCACAACCTCCTGGTCTGCTCTGTGAGTGGTTTCTATCCAGGCAGCATTGAAGTCAGGTGGTTC
CTGAACGCCAGGAAGAGAAGGCTGGGATGGTGTCCACAGGCCTGATCCAGAATGGAGACTGGACCTTC
CAGACCCTGGTGTGCTGGAACAGTTCCTCGAAGTGGAGAGTTTACACCTGCCAAGTGGAGCACCCA
AGCGTGACAAGCCCTCTCACAGTGGAAATGGAGAGCACGGTCTGAATCTGCACAGAGCAAGATGCTGAGT
GGAGTCGGGGGCTTTGTGCTGGCCTGCTTCTTGGGGCCGGGCTGTTTACTTACTCAGGAATCAG
AAAGGACACTCTGGACTTCAGCCAACAGGATTCCTGAGC
ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGAT
TACAAGGATGACGACGATAAGGTTTAAACGGCCGGC
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Protein Sequence: >Peptide sequence encoded by RC218764
 Blue=ORF Red=Cloning site Green=Tag(s)

MVCLKLPGGSCMTALVTLMVLSPLALSGDTRPRFLWQPKRECHFFNGTERVRFDRFYFNQEEVSRF
 DSDVGEFRAVTELRPDAEYVNSQKDILEQARAADVTCRHNHYGVVSEFTVQRRVQPKVTYVPSKTQPL
 QHHNLLVCSVSGFYPGSIEVRWFLNGQEEKAGMVSTGLIQNGDWTFTQLVMLETVPRSGEVYTCQVEHP
 SVTSPLTVEWRARSESAQSKMLSGVGGFVLGLLFLGAGLFIYFRNQKGHSGLQPTGFLS
 TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Recombinant protein using RC218764 also available, [TP318764M](#)

Chromatograms: https://cdn.origene.com/chromatograms/mk8007_g05.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_002124

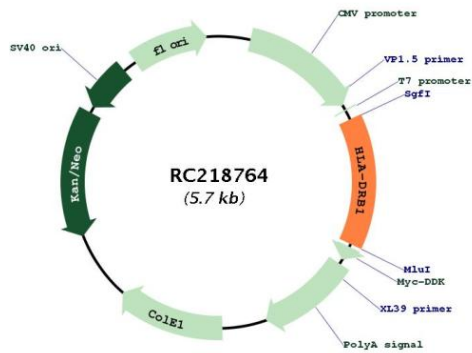
ORF Size: 798 bp

OTI Disclaimer: Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.

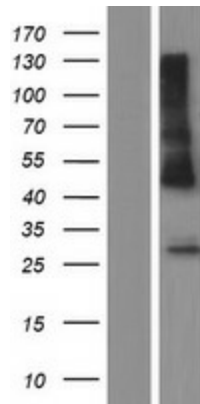
The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in 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_002124.4
RefSeq Size:	1182 bp
RefSeq ORF:	801 bp
Locus ID:	3123
UniProt ID:	P04229
Cytogenetics:	6p21.32
Domains:	MHC_II_beta, ig, IGc1
Protein Families:	Transmembrane
Protein Pathways:	Allograft rejection, Antigen processing and presentation, Asthma, Autoimmune thyroid disease, Cell adhesion molecules (CAMs), Graft-versus-host disease, Hematopoietic cell lineage, Systemic lupus erythematosus, Type I diabetes mellitus, Viral myocarditis
MW:	30 kDa
Gene Summary:	HLA-DRB1 belongs to the HLA class II beta chain paralogs. The class II molecule is a heterodimer consisting of an alpha (DRA) and a beta chain (DRB), both anchored in the membrane. It plays a central role in the immune system by presenting peptides derived from extracellular proteins. Class II molecules are expressed in antigen presenting cells. The beta chain is approximately 26-28 kDa. It is encoded by 6 exons. Exon one encodes the leader peptide; exons 2 and 3 encode the two extracellular domains; exon 4 encodes the transmembrane domain; and exon 5 encodes the cytoplasmic tail. Within the DR molecule the beta chain contains all the polymorphisms specifying the peptide binding specificities. Hundreds of DRB1 alleles have been described and some alleles have increased frequencies associated with certain diseases or conditions. For example, DRB1*1302 has been related to acute and chronic hepatitis B virus persistence. There are multiple pseudogenes of this gene. [provided by RefSeq, Jul 2020]

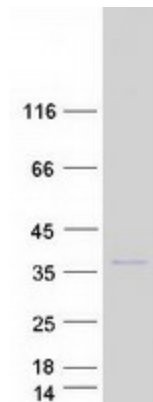
Product images:



Circular map for RC218764



Western blot validation of overexpression lysate (Cat# [LY419519]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC218764 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified HLA-DRB1 protein (Cat# [TP318764]). The protein was produced from HEK293T cells transfected with HLA-DRB1 cDNA clone (Cat# RC218764) using MegaTran 2.0 (Cat# [TT210002]).