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Product datasheet for RC203646

HLA-DRB5 (NM_002125) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	HLA-DRB5 (NM_002125) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	HLA-DRB5
Synonyms:	HLA-DRB5*
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)

ORF Nucleotide Sequence:

>RC203646 ORF sequence
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGGTGTGTCTGAAGCTCCCTGGAGGTTCCTACATGGCAAAGCTGACAGTGACACTGATGGTGCTGAGCT
CCCCACTGGCTTTGGCTGGGGACACCCGACCACGTTTCTTGCAGCAGGATAAGTATGAGTGTCATTTCTT
CAACGGGACGGAGCGGGTGCGGTTCCTGCACAGAGACATCTATAACCAAGAGGAGGACTTGCGCTTCGAC
AGCGACGTGGGGGAGTACCGGGCGGTGACGGAGCTGGGGCGGCCTGACGCTGAGTACTGGAACAGCCAGA
AGGACTTCCTGGAAGACAGGCGCGCCGCGGTGGACACCTACTGCAGACACAACTACGGGGTTGGTGAGAG
CTTCACAGTGCAGCGGCGAGTTGAGCCTAAGGTGACTGTGTATCCTGCAAGGACCCAGACCCTGCAGCAC
CACAACCTCCTGGTCTGCTCTGTGAATGGTTTCTATCCAGGCAGCATTGAAGTCAGGTGGTTCCGGAACA
GCCAGGAAGAGAAGGCTGGGGTGGTGTCCACAGGCCTGATTCAGAATGGAGACTGGACCTTCCAGACCCT
GGTGATGCTGGAAACAGTTCCTCGAAGTGGAGAGGTTTACACCTGCCAAGTGGAGCACCCAAGCGTGACG
AGCCCTCTCACAGTGGAATGGAGAGCACAGTCTGAATCTGCACAGAGCAAGATGCTGAGTGGAGTCGGGG
GCTTTGTGCTGGGCCTGCTCTTCCTTGGGGCCGGGCTATTCATCTACTTCAAGAATCAGAAAGGGCACTC
TGGACTTCACCCAACAGGACTCGTGAGC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

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Protein Sequence:

>RC203646 protein sequence
Red=Cloning site Green=Tags(s)

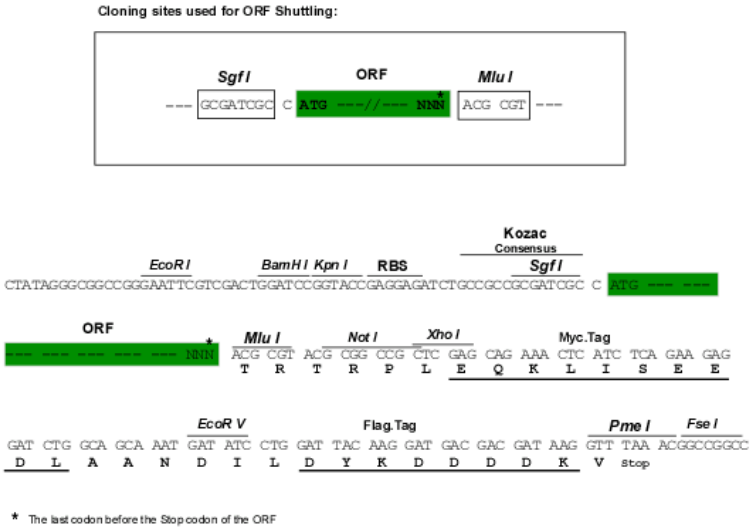
MVCLKLPGGSYMAKLTVTLMVLSSPLALAGDTRPRFLQQDKYECHFFNGTERVRFLHRDIYNQEEDLRFD
SDVGEYRAVTELGRPDAEYWNSQKDFLEDRRAAVDTYCRHNYGVGESFTVQRRVEPKVTVYPARTQTLQH
HNLLVCSVNGFYPGSIEVRWFRNSQEEKAGVVSTGLIQNGDWTFQTLVMLETVPRSGEVYTCQVEHPSVT
SPLTVEWRAQSESAQSKMLSGVGGFVLGLLFLGAGLFIYFKNQKGHSGLHPTGLVS

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6424_g11.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_002125

ORF Size: 798 bp

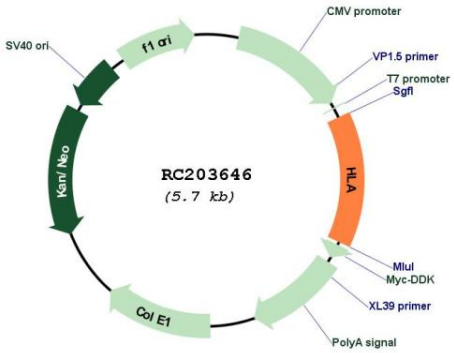
OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially 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.

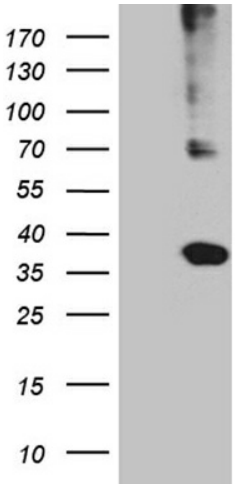
Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

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_002125.4
RefSeq Size:	1171 bp
RefSeq ORF:	801 bp
Locus ID:	3127
UniProt ID:	Q30154
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:	30.1 kDa
Gene Summary:	HLA-DRB5 belongs to the HLA class II beta chain paralogues. This class II molecule is a heterodimer consisting of an alpha (DRA) and a beta (DRB) chain, 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 and its gene contains 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. Typing for these polymorphisms is routinely done for bone marrow and kidney transplantation. There are multiple pseudogenes of this gene. [provided by RefSeq, Feb 2020]

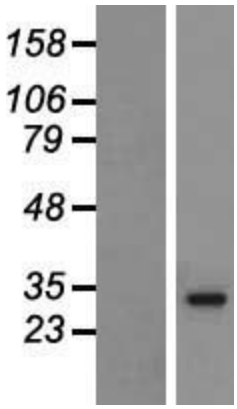
Product images:



Circular map for RC203646



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY HLA (Cat# RC203646, 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-HLA (Cat# [TA812174]). Positive lysates [LY419520] (100ug) and [LC419520] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY419520]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from un-transfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC203646 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).