

Product datasheet for **RG218764**

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:	TurboGFP
Symbol:	HLA-DRB1
Synonyms:	DRB1; HLA-DR1B; HLA-DRB; SS1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG218764 representing NM_002124 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGTGTGTCTGAAGCTCCCTGGAGGCTCCTGCATGACAGCGCTGACAGTGACACTGATGGTGCTGAGCT
CCCCACTGGCTTTGGCTGGGGACACCCGACCACGTTTCTTGTGGCAGCTTAAGTTTGAATGTCATTTCTT
CAATGGGACGGAGCGGGTGGCTGGAAAGATGCATCTATAACCAAGAGGAGTCCGTGCGCTTCGAC
AGCGACGTGGGGAGTACCGGGCGGTGACGGAGCTGGGGCGCCTGATGCCGAGTACTGGAACAGCCAGA
AGGACCTCCTGGAGCAGAGGGCGGCCGCGTGGACACCTACTGCAGACACAACACTACGGGGTTGGTGAGAG
CTTCACAGTGCAGCGCGAGTTGAGCCTAAGGTGACTGTGTATCCTTCAAAGACCCAGCCCTGCAGCAC
CACAACCTCCTGGTCTGCTCTGTGAGTGGTTTCTATCCAGGCAGCATTGAAGTCAGGTGGTTCGGAAACG
GCCAGGAAGAGAAGGCTGGGGTGGTGTCCACAGGCCTGATCCAGAATGGAGATTGGACCTTCAGACCCCT
GGTGTGCTGGAAACAGTTCTCGGAGTGGAGAGGTTTACACCTGCCAAGTGGAGCACCCAAGTGTGACG
AGCCCTCTCACAGTGGAAATGGAGAGCACGGTCTGAATCTGCACAGAGCAAGATGCTGAGTGGAGTCGGGG
GCTTCGTGCTGGCCTGCTCTTCTTGGGGCCGGGCTGTTTCATCTACTTCAGGAATCAGAAAGGACACTC
TGGACTTCAGCCAACAGGATTCTGAGC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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Protein Sequence: >RG218764 representing NM_002124
 Red=Cloning site Green=Tags(s)

MVCLKLPGGSCMTALTVTLMLVSSPLALAGDTRPRFLWQLKFECHFFNGTERVRLLERCIYNQEEESVRFD
 SDVGEYRAVTELGPRDAEYWNSQKDLLEQRRAAVDTYCRHNYGVGESFTVQRRVEPKVTVYPSKTQPLQH
 HNLLVCSVSGFYPGSIEVRWFRNGQEEKAGVSTGLIQNGDWFQTLVMLETVPRSGEVYTCQVEHPSVT
 SPLTVEWRARSESAQSKMLSGVGGFVLGLLFLGAGLFIYFRNQKHSGLQPTGFLS

TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_002124

ORF Size: 798 bp

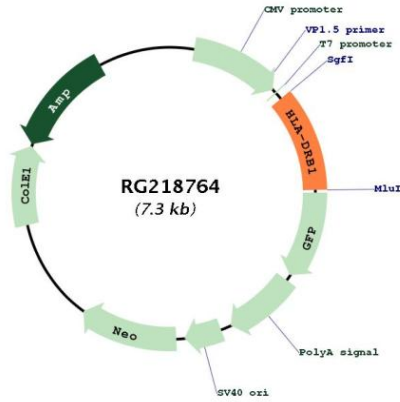
OTI Disclaimer: Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA 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:	<u>NM_002124.1</u> , <u>NP_002115.1</u>
RefSeq Size:	1182 bp
RefSeq ORF:	801 bp
Locus ID:	3123
UniProt ID:	<u>P04229</u>
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
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 RG218764