

Product datasheet for **RG215902**

HLA-DQB1 (NM_002123) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	HLA-DQB1 (NM_002123) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	HLA-DQB1
Synonyms:	CELIAC1; HLA-DQB; IDDM1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG215902 representing NM_002123 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGTCTTGAAAAAGGCTTTGCGGATCCCCGGAGGCCTTCGGGCAGCAACTGTGACCTTGATGCTGTCTGA
TGCTGAGCACCCAGTGGCTGAGGGCAGAGACTCTCCCGAGGATTCGTGTACCAGTTTAAGGGCATGTG
CTACTTCACCAACGGGACAGAGCGGTGCGTCTTGTGAGCAGAAGCATCTATAACCGAGAAGAGATCGTG
CGCTTCGACAGCGACGTGGGGGAGTTCCGGCGGTGACGCTGCTGGGGCTGCCTGCCGCCGAGTACTGGA
ACAGCCAGAAGGACATCCTGGAGAGGAAACGGGCGCGGTGGACAGGGTGTGCAGACACAACCTACCAGTT
GGAGCTCCGCACGACCTTGCAGCGGCGAGTGGAGCCACAGTGACCATCTCCCATCCAGGACAGAGGCC
CTCAACCACCACAACCTGCTGGTCTGCTCGGTGACAGATTTCTATCCAGCCAGATCAAAGTCCGGTGGT
TTCCGGAATGACCAGGAGGAGACAGCTGGCGTTGTGTCCACCCCTTATTAGGAATGGTACTGGACCTT
CCAGATCTGGTGTGCTGGAATGACTCCCCAGCGTGGAGACGTCTACACCTGCCACGTGGAGCACCCC
AGCCTCCAGAGCCCCATCACCGTGGAGTGGCGGGCTCAATCTGAATCTGCCAGAGCAAGATGCTGAGTG
GCATTGGAGGCTTCGTGCTGGGGCTGATCTTCTCGGGCTGGGCCTTATCATCCATCACAGGAGTCAGAA
AGGGCTCCTGCAC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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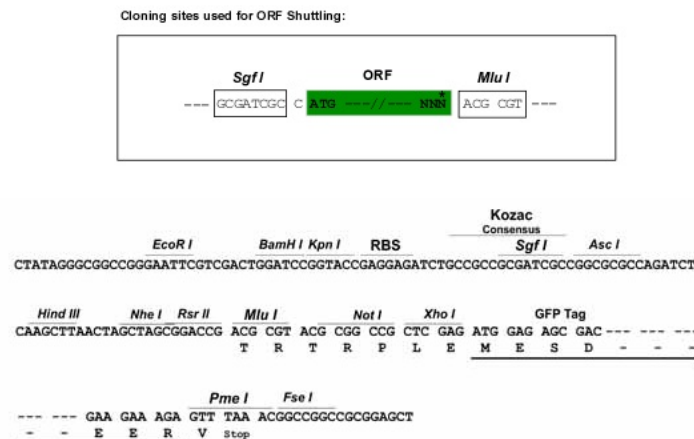
Protein Sequence: >RG215902 representing NM_002123
 Red=Cloning site Green=Tags(s)

MSWKKALRIPGGLRAATVTLML SMLSTPVAEGRDSPEDFVYQFKGMCYFTNGTERVRLVSRSIYNREEIV
 RFDSVDVGEFRAVTL LGLPAAEYWNSQKDILERKRAAVDRVCRHNYQLELR TTLQRRVEPTVTISPSRTEA
 LNHHNLLVCSVTD FYPAQIKVRWFRNDQEETAGVVSTPLIRNGD WTFQILVMLEMTPQRGDVYTCHVEHP
 SLQSPITVEWRAQSESAQSKMLSGIGGFVLGLIFLGLGLIIHRSQKGLLH

TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_002123

ORF Size: 783 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_002123.2](#), [NP_002114.2](#)

RefSeq Size: 1190 bp

RefSeq ORF: 786 bp

Locus ID: 3119

UniProt ID: [P01920](#)

Cytogenetics: 6p21.32

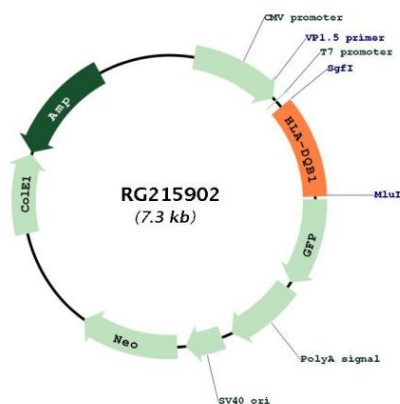
Domains: MHC_II_beta, ig, IGc1

Protein Families: Transmembrane

Protein Pathways: Allograft rejection, Antigen processing and presentation, Asthma, Autoimmune thyroid disease, Cell adhesion molecules (CAMs), Graft-versus-host disease, Systemic lupus erythematosus, Type I diabetes mellitus, Viral myocarditis

Gene Summary: HLA-DQB1 belongs to the HLA class II beta chain paralogs. This class II molecule is a heterodimer consisting of an alpha (DQA) and a beta chain (DQB), 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 (APC: B lymphocytes, dendritic cells, macrophages). The beta chain is approximately 26-28 kDa and it contains six exons. Exon 1 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 DQ molecule both the alpha chain and the beta chain contain the polymorphisms specifying the peptide binding specificities, resulting in up to four different molecules. Typing for these polymorphisms is routinely done for bone marrow transplantation. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Sep 2011]

Product images:



Circular map for RG215902