

Product datasheet for **RG209921**

HLADQA1 (HLA-DQA1) (NM_002122) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	HLADQA1 (HLA-DQA1) (NM_002122) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	HLADQA1
Synonyms:	CELIAC1; DQ-A1; DQA1; HLA-DQA
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG209921 representing NM_002122 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGATCCTAAACAAAGCTCTGCTGCTGGGGCCCTCGCTCTGACCACCGTGATGAGCCCCTGTGGAGGTG
AAGACATTGTGGCTGACCATGTTGCCTCTTGTGGTGAACTTGTACCAGTTTTACGGTCCCTCTGGCCA
GTTCACCCATGAATTTGATGGAGATGAGCAGTTCTACGTGGACCTGGAGAAGAAGGAGACTGCCTGGCGG
TGGCCTGAGTTCAGCAAATTTGGAGTTTTGACCCGACGGGTGCACTGAGAAACATGGCTGTGGCAAAC
ACAACCTGAACATCATGATTAACGCTACAACCTACCGCTGCTACCAATGAGGTTCTGAGGTCACAGT
GTTTTCCAAGTCTCCCGTGACACTGGGTGAGCCCAACACCTCATCTGTCTGGACAACATCTTCCCTCT
GTGGTCAACATCATGCTGAGCAATGGCAGCAGTACAGAAAGGTGTTTCTGAGACCAGCTTCTCT
CCAAGAGTGATCATTCTTCTTCAAGATCAGTTACCTCACCTTCTCCCTTCTGCTGATGAGATTTATGA
CTGCAAGGTGGAGCACTGGGGCCTGGACCAGCCTTCTGAAACACTGGGAGCCTGAGATTCAGCCCT
ATGTCAGAGCTCACAGAGACTGTGGTCTGTGCCCTGGGGTTGTCTGTGGGCTCGTGGGCATTGTGGTGG
GCACTGTCTTCATCATCCAAGGCCTGCGTTCAGTTGGTGTCTCCAGACACCAAGGCCCTTG

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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Protein Sequence: >RG209921 representing NM_002122
 Red=Cloning site Green=Tags(s)

MILNKALLL GALALTTVMSPCGGEDIVADHVASCNVLYQFYGPSGQF THEFDGDEQFYVDLEKKETAWR
 WPEFSKFGGFD PQGALRNMAVAKHNLNIMIKRYNSTAATNEVPEVTVF SKSPVTLGQPNTLICLDNIFPP
 VVNITWLSNGHAVTEGVSETSFLSKSDHSFFKISYL TFLPSADEIYDCKVEHWGLDQPLLKHWEPEIPAP
 MSELTETVVCALGLSVGLVGI VGT VFI IQGLRSV GASRHQGPL

TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_002122

ORF Size: 762 bp

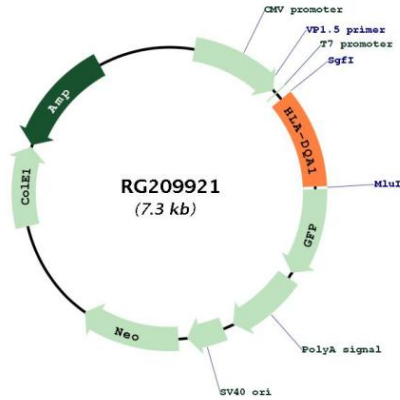
OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially 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:	<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_002122.3 , NP_002113.2
RefSeq Size:	1542 bp
RefSeq ORF:	768 bp
Locus ID:	3117
UniProt ID:	P01909
Cytogenetics:	6p21.32
Domains:	MHC_II_alpha, 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-DQA1 belongs to the HLA class II alpha chain paralogues. The 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 alpha chain is approximately 33-35 kDa. It is encoded by 5 exons; exon 1 encodes the leader peptide, exons 2 and 3 encode the two extracellular domains, and exon 4 encodes the transmembrane domain and 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. [provided by RefSeq, Jul 2008]

Product images:



Circular map for RG209921