

## Product datasheet for **RG233883**

### HLAA (HLA-A) (NM\_001242758) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	HLAA (HLA-A) (NM_001242758) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	HLAA
Synonyms:	HLAA
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG233883 representing NM_001242758 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGC**C

ATGGCCGTATGGCGCCCGAACCCCTCCTCTGCTACTCTCGGGGGCCCTGGCCCTGACCCAGACCTGGG  
CGGGCTCCACTCCATGAGGATTTCTTCACATCCGTGTCCCGGCCCGCCGGGGAGCCCGCTTCAT  
CGCCGTGGGCTACGTGGACGACACGCAGTTCGTGCGGTTGACAGCGACCGCGAGCCAGAAGATGGAG  
CCGCGGGCGCCGTGGATAGAGCAGGAGGGGCCGAGTATTGGGACCAGGAGACACGGAATATGAAGGCC  
ACTCACAGACTGACCGAGCGAACCTGGGGACCTGCGCGGCTACTACAACCAGAGCGAGGACGGTTCTCA  
CACCATCCAGATAATGTATGGCTGCGACGTGGGGCCGGACGGGGCCTTCTCCCGGGTACCGGCAGGAC  
GCCTACGACGGCAAGGATTACATCGCCCTGAACGAGGACCTGCGCTCTTGACCGCGCGGACATGGCAG  
CTCAGATACCAAGCGCAAGTGGGAGGGTCCATGCGGCGGAGCAGCGGAGAGTCTACCTGGAGGGCCG  
GTGCGTGGACGGGCTCCGCAGATACCTGGAGAACGGGAAGGAGACGCTGCAGCGCACGGACCCCCCAAG  
ACACATATGACCCACCACCCATCTCTGACCATGAGGCCACCCTGAGGTGCTGGGCCCTGGGCTTCTACC  
CTGCGGAGATCACACTGACCTGGCAGCGGGATGGGAGGACCAGACCAGGACACGGAGCTCGTGGAGAC  
CAGGCCGTCAGGGGATGGAACCTTCCAGAAGTGGCGGCTGTGGTGGTGCCTTCTGGAGAGGAGCAGAGA  
TACACCTGCCATGTGCAGCATGAGGGTCTGCCAAGCCCTCACCTGAGATGGGAGCTGTCTTCCAGC  
CCACCATCCCATCGTGGGCATCATTGCTGGCCTGGTTCTCCTTGGAGCTGTGATCACTGGAGCTGTGGT  
CGCTGCCGTGATGTGGAGGAGGAAGAGCTCAGATAGAAAAGGAGGGAGTTACACTCAGGCTGCAAGCAGT  
GACAGTGCCAGGGCTCTGATGTGTCTCTCACAGCTTGTAAAGTG

**ACGCGT**ACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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**Protein Sequence:** >RG233883 representing NM\_001242758  
Red=Cloning site Green=Tags(s)

MAVMAPRTLLLLLSGALALTQTWAGSHSMRYFFTSVSRPGRGEPRFIAVGYVDDTQFVRFSDAASQKME  
 PRAPWIEQEGPEYWDQETRNMKAHSQTDRLNLTGLRGYYNQSEDSHTIQIMYGCDVGPDRFLRGYRQD  
 AYDGKDYIALNEDLRSWTAADMAAQITKRKWEAVHAAEQRRVYLEGRCDGLRRYLENGKETLQRTDPPK  
 THMTHHPISDHEATLRCWALGFYPAEITLTWRDGEDQTQDELVETRPAGDGTQKWAAVVPSGEEQR  
 YTHVQHEGLPKPLTLRWELSSQPTIPIVGIAGLVLLGAVITGAVVAAMWRRKSSDRKGGSYTQAASS  
 DSAQGSVDVSLTACKV

TRTRPLE - GFP Tag - V

**Chromatograms:** [https://cdn.origene.com/chromatograms/ja3397\\_e12.zip](https://cdn.origene.com/chromatograms/ja3397_e12.zip)

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_001242758

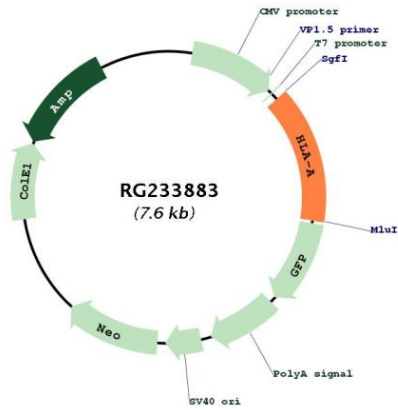
**ORF Size:** 1095 bp

**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](mailto: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](#)

<b>OTI Annotation:</b>	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>RefSeq:</b>	<a href="#">NM_001242758.1</a> , <a href="#">NP_001229687.1</a>
<b>RefSeq Size:</b>	1611 bp
<b>RefSeq ORF:</b>	1098 bp
<b>Locus ID:</b>	3105
<b>UniProt ID:</b>	<a href="#">P01892</a>
<b>Cytogenetics:</b>	6p22.1
<b>Protein Families:</b>	Transmembrane
<b>Protein Pathways:</b>	Allograft rejection, Antigen processing and presentation, Autoimmune thyroid disease, Cell adhesion molecules (CAMs), Endocytosis, Graft-versus-host disease, Natural killer cell mediated cytotoxicity, Type I diabetes mellitus, Viral myocarditis
<b>Gene Summary:</b>	HLA-A belongs to the HLA class I heavy chain paralogues. This class I molecule is a heterodimer consisting of a heavy chain and a light chain (beta-2 microglobulin). The heavy chain is anchored in the membrane. Class I molecules play a central role in the immune system by presenting peptides derived from the endoplasmic reticulum lumen so that they can be recognized by cytotoxic T cells. They are expressed in nearly all cells. The heavy chain is approximately 45 kDa and its gene contains 8 exons. Exon 1 encodes the leader peptide, exons 2 and 3 encode the alpha1 and alpha2 domains, which both bind the peptide, exon 4 encodes the alpha3 domain, exon 5 encodes the transmembrane region, and exons 6 and 7 encode the cytoplasmic tail. Polymorphisms within exon 2 and exon 3 are responsible for the peptide binding specificity of each class one molecule. Typing for these polymorphisms is routinely done for bone marrow and kidney transplantation. More than 6000 HLA-A alleles have been described. The HLA system plays an important role in the occurrence and outcome of infectious diseases, including those caused by the malaria parasite, the human immunodeficiency virus (HIV), and the severe acute respiratory syndrome coronavirus (SARS-CoV). The structural spike and the nucleocapsid proteins of the novel coronavirus SARS-CoV-2, which causes coronavirus disease 2019 (COVID-19), are reported to contain multiple Class I epitopes with predicted HLA restrictions. Individual HLA genetic variation may help explain different immune responses to a virus across a population.[provided by RefSeq, Aug 2020]

Product images:



Circular map for RG233883