

## Product datasheet for **RC208121**

### UBL4A (NM\_014235) Human Tagged ORF Clone

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** UBL4A (NM\_014235) Human Tagged ORF Clone  
**Tag:** Myc-DDK  
**Symbol:** UBL4A  
**Synonyms:** DX254E; DXS254E; G6PD; GDX; GET5; MDY2; TMA24; UBL4  
**Mammalian Cell Selection:** Neomycin  
**Vector:** pCMV6-Entry (PS100001)  
**E. coli Selection:** Kanamycin (25 ug/mL)  
**ORF Nucleotide Sequence:** >RC208121 representing NM\_014235  
**Red=Cloning site Blue=ORF Green=Tags(s)**

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGCAGCTGACGGTGAAGGCGCTGCAGGGCCGCGAGTGCAGCCTGCAGGTGCCAGAGGACGAGCTGGTGT  
CCACGCTGAAGCAGCTGGTCTCCGAGAAGCTGAACGTCCCAGTGCGCCAGCAGCGGCTGCTGTTCAAGGG  
CAAGGCCCTGGCAGATGGGAAACGACTCTCGGATTATAGCATCGGGCCAACTCCAAGCTCAACCTAGTG  
GTCAAACCCCTGGAGAAGGTGCTACTAGAAGAAGGCGAGGCCAGAGGCTGGCCGACTCCCACCCCGC  
AGGTCTGGCAGCTGATCTCAAAGTCTTGCCCGCCACTTCAGTGCAGGATGCCAGCAGGGTCTGGA  
ACAGCTACAGAGGATTACGAGAGGTCCCTGAGTCGCCTGACGCTGGACGACATCGAACGTTGGCCAGC  
CGTCTCTGCACCTGAAGTGACTGAGACAATGGAGAAGGGCTTCTCCAAA

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:** >RC208121 representing NM\_014235  
**Red=Cloning site Green=Tags(s)**

MLQTVKALQGRCESLQVPEDELVSTLKQLVSEKLNVPVRQQRLLFKGKALADGKRLSDYSIGPNSKLNLV  
VKPLEKVLLEEGEAQRLADSPPPQVWQLISKVLARHFSAADASRVLEQLQRDYERSLSRLTLDDIERLAS  
RFLHPEVTETMEKGFSK

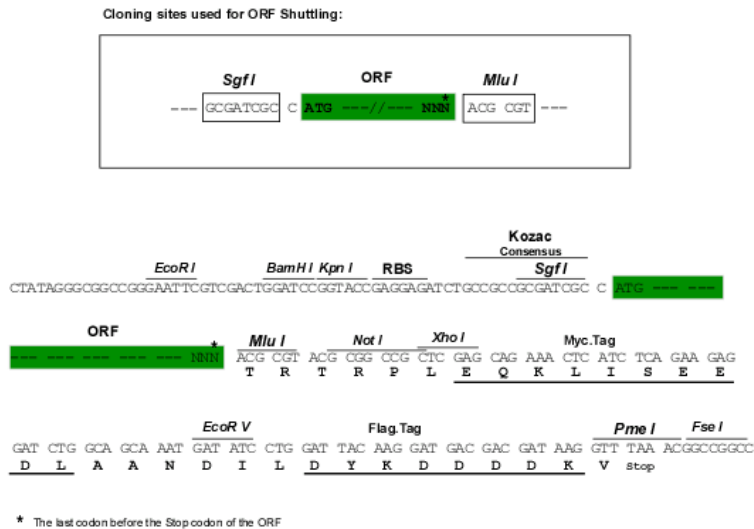
**TRTRPLEQKLI**SEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mg2875\\_a10.zip](https://cdn.origene.com/chromatograms/mg2875_a10.zip)



**Restriction Sites:** Sgfl-MluI

**Cloning Scheme:**



**ACCN:** NM\_014235

**ORF Size:** 471 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.

**Note:** Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

**RefSeq:** [NM\\_014235.5](#)

**RefSeq Size:** 2322 bp

**RefSeq ORF:** 474 bp

Locus ID: 8266

UniProt ID: [P11441](#)

Cytogenetics: Xq28

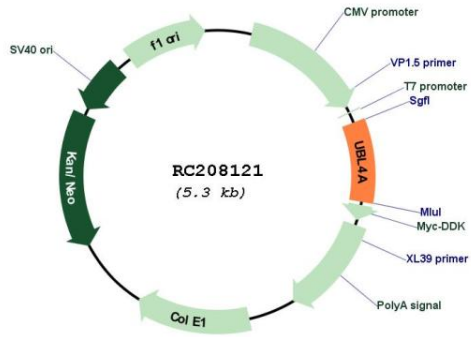
Domains: UBQ

Protein Families: Druggable Genome

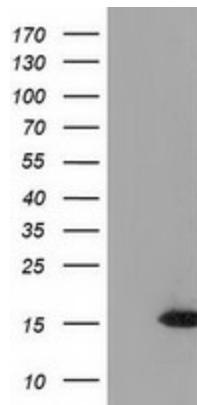
MW: 17.6 kDa

**Gene Summary:** As part of a cytosolic protein quality control complex, the BAG6/BAT3 complex, maintains misfolded and hydrophobic patches-containing proteins in a soluble state and participates to their proper delivery to the endoplasmic reticulum or alternatively can promote their sorting to the proteasome where they undergo degradation (PubMed:20676083, PubMed:21636303, PubMed:21743475, PubMed:28104892). The BAG6/BAT3 complex is involved in the post-translational delivery of tail-anchored/type II transmembrane proteins to the endoplasmic reticulum membrane. Recruited to ribosomes, it interacts with the transmembrane region of newly synthesized tail-anchored proteins and together with SGTA and ASNA1 mediates their delivery to the endoplasmic reticulum (PubMed:20676083, PubMed:28104892, PubMed:25535373). Client proteins that cannot be properly delivered to the endoplasmic reticulum are ubiquitinated and sorted to the proteasome (PubMed:28104892). Similarly, the BAG6/BAT3 complex also functions as a sorting platform for proteins of the secretory pathway that are mislocalized to the cytosol either delivering them to the proteasome for degradation or to the endoplasmic reticulum (PubMed:21743475). The BAG6/BAT3 complex also plays a role in the endoplasmic reticulum-associated degradation (ERAD), a quality control mechanism that eliminates unwanted proteins of the endoplasmic reticulum through their retrotranslocation to the cytosol and their targeting to the proteasome. It maintains these retrotranslocated proteins in an unfolded yet soluble state condition in the cytosol to ensure their proper delivery to the proteasome (PubMed:21636303).[UniProtKB/Swiss-Prot Function]

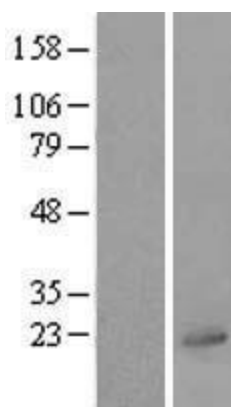
Product images:



Circular map for RC208121



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY UBL4A (Cat# RC208121, 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-UBL4A (Cat# [TA502416]). Positive lysates [LY415426] (100ug) and [LC415426] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY415426]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC208121 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).