

## Product datasheet for **RG200007**

### **KDEL2 (NM\_006854) Human Tagged ORF Clone**

#### Product data:

Product Type:	Expression Plasmids
Product Name:	KDEL2 (NM_006854) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	KDEL2
Synonyms:	ELP-1; ELP1; ERD2.2; OI21
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG200007 representing NM_006854 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGAACATTTTCCGGCTGACTGGGGACCTGTCCCACCTGGCGGCCATCGTCATCCTGCTGCTGAAGATCT  
GGAAGACGCGCTCCTGCGCCGGTATTTCTGGGAAAAGCCAGCTTCTGTTTGCCTGGTCTTCACAACCTCG  
TTACCTGGATCTTTTACTTCATTTATTTTCATTGTATAACACATCTATGAAGTTATCTACCTTGCCTGC  
TCCTATGCCACAGTGACCTGATCTACCTGAAATTTAAGGCAACCTACGATGGAAATCATGATACCTTCC  
GAGTGGAGTTTCTGGTGGTCCCTGTGGGAGGCCTCTCATTTTTAGTTAATCACGATTTCTCTCTCTTGA  
GATCCTCTGGACCTTCTCCATCTACCTGGAGTCCGTGGCTATCCTTCCGAGCTGTTTATGATCAGCAAG  
ACTGGGGAGGCCGAGACCATCACCACTACCTGTTCTTCTGGGCCTCTATCGTGCTTTGTATCTTG  
TCAACTGGATCTGGCGCTTCTACTTTGAGGGCTTCTTTGACCTCATTGCTGTGGTGGCCGGCGTAGTCCA  
GACCATCTATACTGTGACTTCTTCTACTTGTACATTACAAAAGTACTCAAGGGAAAGAAGCTCAGTTTG  
CCAGCA

**ACGCGT**ACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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**Protein Sequence:** >RG200007 representing NM\_006854  
 Red=Cloning site Green=Tags(s)

MNIFRLTGDSLHLAAIVILLKIKWTRSCAGISGKSQLLFALVFTRRYLDLFTSFISLYNTSMKVIYLAC  
 SYATVYLIYLKFKATYDGNHDTFRVEFLVVPVGGLSFLVNHDFSPLEILWTFESIYLESVAIPLQLFMISK  
 TGEAETITTHYLFFLGLYRALYLVNWIWRFYFEGFFDLIAVVAGVVQITILYCDFVLYITKVLKGGKLSL  
 PA

TRTRPLE - GFP Tag - V

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_006854

**ORF Size:** 636 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\\_006854.2](#), [NP\\_006845.1](#)

**RefSeq Size:** 1153 bp

**RefSeq ORF:** 639 bp

**Locus ID:** 11014

**UniProt ID:** [P33947](#)

**Cytogenetics:** 7p22.1

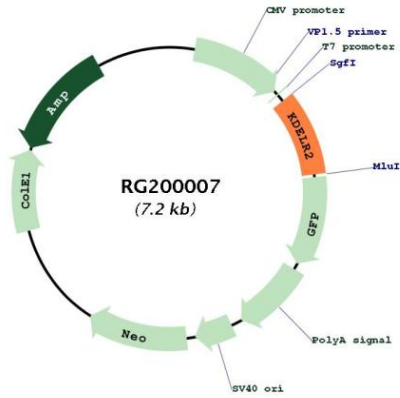
**Domains:** ER\_lumen\_recept

**Protein Families:** Druggable Genome, Transmembrane

**Protein Pathways:** Vibrio cholerae infection

**Gene Summary:** Retention of resident soluble proteins in the lumen of the endoplasmic reticulum (ER) is achieved in both yeast and animal cells by their continual retrieval from the cis-Golgi, or a pre-Golgi compartment. Sorting of these proteins is dependent on a C-terminal tetrapeptide signal, usually lys-asp-glu-leu (KDEL) in animal cells, and his-asp-glu-leu (HDEL) in *S. cerevisiae*. This process is mediated by a receptor that recognizes, and binds the tetrapeptide-containing protein, and returns it to the ER. In yeast, the sorting receptor encoded by a single gene, ERD2, is a seven-transmembrane protein. Unlike yeast, several human homologs of the ERD2 gene, constituting the KDEL receptor gene family, have been described. KDEL2 was the second member of the family to be identified, and it encodes a protein which is 83% identical to the KDEL1 gene product. Alternative splicing results in multiple transcript variants encoding distinct isoforms. [provided by RefSeq, Jul 2008]

Product images:



Circular map for RG200007