

## Product datasheet for **RG223011**

### Cytokeratin 3 (KRT3) (NM\_057088) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Cytokeratin 3 (KRT3) (NM_057088) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	KRT3
Synonyms:	CK3; K3; MECD2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>RG223011 ORF sequence, **codon optimized**.  
 Due to the complexity of NM\_057088, the ORF clone is codon optimized for mammalian Expression.  
 The nucleotide sequence differs from the reference sequence, yet the amino acid sequence remains identical.

Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCTGACTGGATCCGGTACCGAGGAGATCTGCCGCC**CGCATCGCC**

ATGTCGCCCAAGCCAGCAAGACAAGCGGTGGAGGAAGCCAAGGTTTCTCAGGCAGATCCGCTGTCGTGT  
 CAGGCTCATCAAGAATGCTCTGTGTGGCCATAGCGGAGGTGCCGGCGGGGGCGTTATGGTTTCAGGAG  
 TGGCGCTGGTGGCTTCGGCAGTCGAAGTCTTTACAATCTGGGAGGCAATAAATCCATTAGCATCAGTGTG  
 GCCGCCGGGGCTCTAGAGCCGGTGGTTCGGGGGGGCGAGGAGTTCATGCGCCTTCGCCGGGGGTATG  
 CGGTGGCTTCGGTTCTGGGTACGGGGGCGCTTCGGGGGCGGTTTTGGAGGAGGTGGGGGATGGGCGG  
 AGGTTTTGGAGGAGCGGGTGGATTTGGAGGTGCAGGCGGGTTTGGGGGCGCCGGGGGTTTCGGTGGACCT  
 GGCGGATTCGGAGGAGTGGGGCTTCGGCGGACCAGGGAGCCTCGGTAGCCCTGGGGGTTTGGCCCCG  
 GGGGCTTCTGGAGGCATTAGGAAGTCACTACGAACAGTCTCTGTTGCAGCCCTGAAAGTCGAAAC  
 CGACCCTCAGATCGGGCAGGTAAGGCCAGGAAAGGGAACAGATCAAGACACTGAACAATAAGTTTGCA  
 TCTTTCATCGACAAGGTGCGCTTCTGGAGCAACAGAACAAGTCTTGAACAAAGTGGAAATCTGCTGC  
 AACAAAGGAACCTCAAGCATACTGGCACAATAATCTTGAGCCCTGTTGAAAAATCACATCAACTA  
 TCTCCGGAGCTATTTGGACAATATCCTCGGGGAGCGGGGCGACTCGATAGTGAGCTCAAGAATATGGAA  
 GACCTCGTGGAGATTTTAAGAAAAAATGAAGATGAGATAAAATAAGCGCACAGCCGCTGAGAACGAGT  
 TCGTGACCCTCAAAAAGACGTCGACTCCGCATACATGAACAAGTTGAGCTTCAGGCCAAAAGTTGATGC  
 TCTGATCGATGAAATTGACTTCTCAGGACTCTCTATGATGCAGAGCTGTCCCAAATGCAGTCTCACATC  
 AGCGACACATCTGTGGTCTGAGCATGGATAAACAAGATCCCTCGATCTGGACTCCATTATCGCAGAGG  
 TGGGTGCCAATACGAGGATATTGCACAGAGATCTAAAGCTGAAGCTGAGGCCCTCTATCAAACCAAGCT  
 CGGGGAGCTGCAAACGACCGCCGACGGCATGGGGATGATCTTAGAAATACCAAGAGCGAGATCATCGAA  
 CTGAACCGGATGATCCAACGACTTCGGGCAGAGATTGAAGCGTGAAAAAACAATGCTAACCTTCAGA  
 CAGCAATTGCTCAGGCGGAACAACATGGTGAGATGGCGTTGAAGGATGCTAACGCCAAGCTTCAGGAGTT  
 GCAGGCCGCTTTGCAGCAGGCAAAAGATGATTTGGCCAGGCTGTTGAGGGACTATCAGGAGCTTATGAAC  
 GTAAAACCTTGCCTCGATGTGAAATGCTACCTACAGGAAACTCCTGGAGGGCGAGGAATACTCACGAA  
 TGTGAGGCGAGTGTCTAGTGTGTGTCTATCAGTGTCTGTAGCTCCAGTACCACAGCGCTTCAGCTGG  
 CGGATACGGGGGAGGATATGGGGCGGGATGGGGGGGGCTTGGGGGGAGGATTCTCAGCAGGAGGCGGG  
 TCAGGAATTGGCTTTGGCGCGGAGGTGGCGGGGGATTGGCGGTGGCTTCGGGGGCGGCACTTCTGGGT  
 TTTCTGGAGGATCTGGATTTGGTAGCATCAGTGGCGCACGCTATGGCGTCACTGGAGGGGGCTTCTCATC  
 CGCATCAAACCGGGGGGCTCCATCAAATTTTCACAGTCTTCTCAGTCACTCAGCGATATCCCCG

**ACGCGTACGCGGCCGCTCGAG** – GFP Tag – GTTTAA

**Protein Sequence:** >RG223011 representing NM\_057088  
 Red=Cloning site Green=Tags(s)

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MSRQASKTSGGGSQGFSGRSVAVSGSSRMSCVAHSGGAGGGAYGFRSGAGGFGRSLYNLGGNKSISISV
AAGGSRAGGFGGGRSSCAFAGGYGGGFGSGYGGGFGGGFGGGRMGGGFAGAGGFGGAGGFGGAGGFGGP
GGFGGSGGFGGPGSLGSPGGFAPGGFPGGIQEVTNQSLLQPLKVETDPQIGQVKAQEREQIKTLNNKFA
SFIDKVRFLQQNKVLETKWNLLQQQGTSSISGTNNLEPLFENHINYLRSYLDNILGERGRDSELKNME
DLVEDFKKKYEDEINKRTAAENEFVTLKKDVDSAYMKNKVELQAKVDALIDEIDFLRFLYDAELSQMQSHI
SDTSVVL SMDNNRSLDLDSIIAEVGAQYEDIAQRSKAEAEALYQTKLGELQTTAGRHGDDL RNTKSEIIE
LNRMIQRLRAEIEGVKKQANLQTAIAQAEQHGMALKDANAKLQELQAALQQAADDLARLLRDYQELMN
VKLALDVEIATYRKLLEGEYSRMSGECPSAVSISVVSSTTSASAGGYGGYGGMGGGLGGGFSAGGG
SGIGFGRGGGGIGGGFGGTSGFSGSGFGSISGARYGVSGGGFSSASNRGGSIKFSQSSQSSQRYSR
```

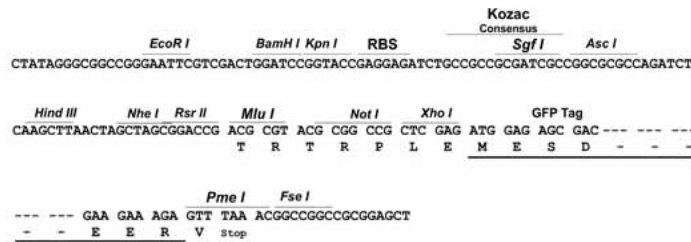
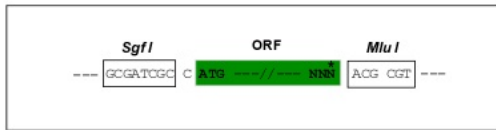
TRTRPLE - GFP Tag - V

**Restriction Sites:**

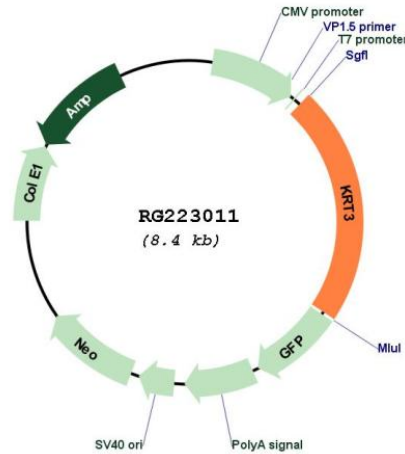
Sgfl-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shutting:



## Plasmid Map:



ACCN: NM\_057088

ORF Size: 1887 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\\_057088.1](#), [NP\\_476429.1](#)

RefSeq Size: 2327 bp

RefSeq ORF: 1887 bp

Locus ID: 3850

UniProt ID: [P12035](#)

Cytogenetics: 12q13.13

**Gene Summary:** The protein encoded by this gene is a member of the keratin gene family. The type II cytokeratins consist of basic or neutral proteins which are arranged in pairs of heterotypic keratin chains coexpressed during differentiation of simple and stratified epithelial tissues. This type II cytokeratin is specifically expressed in the corneal epithelium with family member KRT12 and mutations in these genes have been associated with Meesmann's Corneal Dystrophy. The type II cytokeratins are clustered in a region of chromosome 12q12-q13. [provided by RefSeq, Jul 2008]