

## Product datasheet for **RG226244**

### **CASK (NM\_001126054) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	CASK (NM_001126054) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	CASK
Synonyms:	CAGH39; CAMGUK; CMG; FGS4; hCASK; LIN2; MICPCH; MRXSNA; TNRC8
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide  
Sequence:**

>RG226244 representing NM\_001126054  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTGCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGGCCGACGACGACGTGCTGTTCGAGGATGTGTACGAGCTGTGCGAGGTGATCGGAAAGGGTCCCTTCA  
 GTGTTGTACGACGATGTATCAACAGAGAACTGGGCAACAATTTGCTGTAAAAATTGTTGATGTAGCCAA  
 GTTCACATCAAGTCCAGGTTAAGTACAGAAGATCTAAAGCGGGAAGCCAGTATCTGTATATGCTGAAA  
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 AGCCAGCCATTATAGAGACAGATACTGGAAGCTCTACGCTACTGCCATGATAATAACATAATTCACAGG  
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 ATCCTGCTCAGTGGTTGTTTGCCTTTTTACGGAACCAAGGAAAGATTGTTTGAAGGCATTATTAAGGAA  
 AATATAAGATGAATCCAAGGCAGTGGAGCCATATCTCTGAAAGTGCCAAAGACCTAGTACGTCGCATGCT  
 GATGCTGGATCCAGCTGAAAGGATCACTGTTTATGAAGCACTGAATCACCCATGGCTTAAGGAGCGGGAT  
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 TCACAATTATCAACAATGAAATGATGAGACAATCAGACATCTGGAGGAAGCTGTTGAGCTCGTGTGCAC  
 AGCCCCACAGTGGTCCCTGTCTCCTGGTCTAT

**ACGCGTACGCGGCCGCTCGAG** - GFP Tag - GTTTAA

**Protein Sequence:** >RG226244 representing NM\_001126054  
 Red=Cloning site Green=Tags(s)

MADDDVLFEDVYELCEVIGKGPFSVVRRCINRETGQQFAVKIVDVAKFTSSPGLSTEDLKREASICHMLK  
 HPHIVELLEITYSSDGLMYVFEFMDGADLCFEIVKRADAGVYSEAVASHYMRQILEALRYCHDNNIIHR  
 DVKPHCVLLASKENSAPVKLGGFGVAIQLGESGLVAGGRVGTPHFMAPEVVKREPYGKPVVDVWGCGVILF  
 ILLSGCLPFYGTKERLFEIGIKGKYKMNPRQWSHISESAKDLVRRMLMLDPAERITVYEALNHPWLKERD  
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 EEVVKLPFAFKRRTLVLGAHVGRRHIKNTLITKHPDRFAYPHPHTTRPPKKDEENGKNYFVSHDQMMQ  
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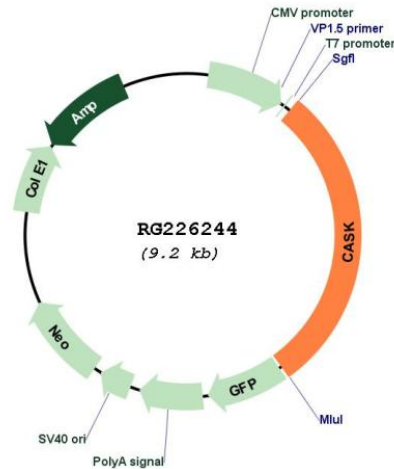
TRTRPLE - GFP Tag - V

**Restriction Sites:**

Sgfl-MluI

**Cloning Scheme:**



**Plasmid Map:**


**ACCN:** NM\_001126054

**ORF Size:** 2694 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\\_001126054.2](#), [NP\\_001119526.1](#)

**RefSeq Size:** 8229 bp

**RefSeq ORF:** 2697 bp

**Locus ID:** 8573

**UniProt ID:** [O14936](#)

**Cytogenetics:** Xp11.4

**Protein Families:** Druggable Genome, Protein Kinase

**Protein Pathways:** Tight junction

**Gene Summary:** This gene encodes a calcium/calmodulin-dependent serine protein kinase. The encoded protein is a MAGUK (membrane-associated guanylate kinase) protein family member. These proteins are scaffold proteins and the encoded protein is located at synapses in the brain. Mutations in this gene are associated with FG syndrome 4, intellectual disability and microcephaly with pontine and cerebellar hypoplasia, and a form of X-linked intellectual disability. Multiple transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Jul 2017]