

Product datasheet for **RC220531**

CASK (NM_003688) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	CASK (NM_003688) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	CASK
Synonyms:	CAGH39; CAMGUK; CMG; FGS4; hCASK; LIN2; MICPCH; MRXSNA; TNRC8
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide
Sequence:**

>RC220531 representing NM_003688
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGGCCGACGACGACGTGCTGTTCGAGGATGTGTACGAGCTGTGCGAGGTGATCGGAAAGGGTCCCTTCA
 GTGTTGTACGACGATGTATCAACAGAGAACTGGGCAACAATTTGCTGTAAAAATTGTTGATGTAGCCAA
 GTTCACATCAAGTCCAGGTTAAGTACAGAAGATCTAAAGCGGGAAGCCAGTATCTGTATATGCTGAAA
 CATCCACACATTGTAGAGTTATTGGAGACATATAGCTCAGATGGAATGCTTTACATGGTTTTCGAATTTA
 TGGATGGAGCAGATCTGTGTTTTGAAATCGTAAAGCGAGCTGACGCTGGTTTTGTGTACAGTGAAGCTGT
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 GATGTGAAGCCCCACTGTGTTCTCCTTGCCTCAAAGAAAACCTCGGCACCTGTTAACTTGGAGGCTTTG
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 GATGCTGGATCCAGCTGAAAGGATCACTGTTTATGAAGCACTGAATCACCCATGGCTTAAGGAGCGGGAT
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 TTGTTGCAAGAATTATGCATGGGGCATGATTCACAGGCAAGGTACACTTATGTTGGTGTGAAATTCG
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 ATTCCACATACAACCAGACCTCCAAGAAAGACGAAGAAAATGGAAAGAATTATTACTTTGTATCTCATG
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 AACTACTTCGATCTACAATTATCAACAATGAAATTGATGAGACAATCAGACATCTGGAGGAAGCTGTT
 GAGCTCGTGTGCACAGCCCCACAGTGGTCCCTGTCTCCTGGTCTAT

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAAGTTTAA

Protein Sequence: >RC220531 representing NM_003688
Red=Cloning site Green=Tags(s)

MADDDVLFEDVYELCEVIGKGPFSVVRRCINRETGOQFAVKIVDAKFTSSPGLSTEDLKREASICHMLK
 HPHIVELLEITYSSDGLYMFVFEFMDGADLCFEIVKRADAGFVYSEAVASHYMRQILEALRYCHDNNIHR
 DVKPHCVLLASKENSAPVKLGGFGVAIQLGESGLVAGGRVGTPHFMAPEVVKREPYGKPVVWGCQVILF
 ILLSGCLPFYGTKERLFEGIIKGYKMNPRQWSHISESAKDLVRRMLMDPAERITVYEALNHPWLKERD
 RYAYKIHLPETVEQLRKFNARRKLGAVLAAVSSHKFNFSFYGDPPPEELPDFSEDPTSSGLLAAERAVSQV
 LDLEEIHALDTCSEKDLDFLHSVFQDQHLHTLLDLYDKINTKSSPQIRNPPSDAVQRAKEVLEEISCPY
 ENNDAKELKRILTQPHFMALLQTHDVVAHEVYSDEALRVTPPTSPYLNQDSPESANGMDMENVTRVRL
 VQFQKNTDEPMGITLKMNELNHCIVARIMHGGMIHRQGLHVGDEIREINGISVANQTVELQKMLREMR
 GSITFKIVPSYRTQSSSCERDPSSTSRQSPANGHSSTNNSVSDLPSTTQPKGRQIYVRAQFEYDPAKDDL
 IPCKEAGIRFRVGDIIQIISKDDHNWQKLENSKNGTAGLIPSELQEWVACIAMEKTKQEQQASCTW
 FGKQKQYKDYLAKHNAVFDQLDLVTYEEVVKLPAFKRRTLVLGAHGVGRRHIKNTLITKHPDRFAYP
 IPHTTRPPKKDEENGKNYFVSHDQMMQDISNNEYLEYGSHEDAMYGTKLETIRKIHEQGLIAILDVEPQ
 ALKVLRTAEAFVVFVIAAPTITPGLNEDESLQRLQKESDILQRTYAHYFDLTIINNEIDETIRHLEEA
 ELVCTAPQWVPVSWVY

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mg4161_f02.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



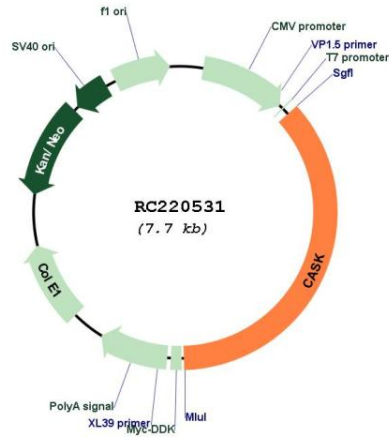
* The last codon before the Stop codon of the ORF

ACCN: NM_003688

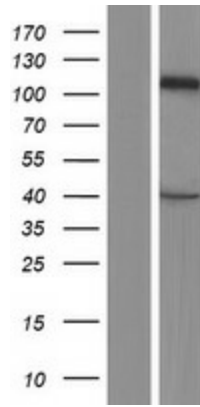
ORF Size: 2778 bp

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:	<ol style="list-style-type: none">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 Size:	3122 bp
RefSeq ORF:	2766 bp
Locus ID:	8573
UniProt ID:	O14936
Cytogenetics:	Xp11.4
Domains:	pkinase, TyrKc, SH3, PDZ, S_TKc, L27, Guanylate_kin, GuKc
Protein Families:	Druggable Genome, Protein Kinase
Protein Pathways:	Tight junction
MW:	104.3 kDa
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]

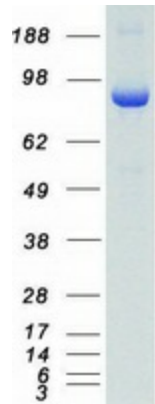
Product images:



Circular map for RC220531



Western blot validation of overexpression lysate (Cat# [LY401218]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC220531 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified CASK protein (Cat# [TP320531]). The protein was produced from HEK293T cells transfected with CASK cDNA clone (Cat# RC220531) using MegaTran 2.0 (Cat# [TT210002]).