

Product datasheet for **RG223777**

beta Casein (CSN2) (NM_001891) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	beta Casein (CSN2) (NM_001891) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	beta Casein
Synonyms:	CASB; PDC213
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG223777 representing NM_001891 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGAAGGTCCTCATCCTCGCCTGCCTGGTGGCTCTTGCTCTTGCAAGGGAGACCATAGAAAGCCTTTCAA
GCAGTGAGGAATCTATTACAGAATAACAAGCAGAAAGTTGAGAAGGTTAAACATGAGGACCAGCAGCAAGG
AGAGGATGAACACCAGGATAAAAATCTACCCCTTTCCAGCCACAGCCTCTGATCTATCCATTTCGTTGAA
CCTATCCCCTATGGTTTCTTCCACAAAACATTCTGCCTCTTGCTCAGCCTGCTGTGGTGTGCCTGTCC
CTCAGCCTGAAATAATGGAAGTCCCTAAAGCTAAAGACTGTCTACACTAAGGGCAGAGTGATGCCTGT
CCTTAAATCTCCAACGATACCCTTTTTTGACCCTCAAATCCAAAACACTACTGATCTTGAAAATCTGCAT
CTTCTCTGCCTCTGCTCCAGCCCTTGATGCAGCAGGTCCCTCAGCCTATTCTCAGACTCTTGCACTTC
CCCCTCAGCCCCTGTGGTCTGTTCTCAGCCCAAAGTCTGCCTATCCCCAGCAAGTGGTGCCTACCC
TCAGAGAGCTGTGCCTGTTCAAGCCCTTCTGCTCAACCAAGAAGTCTACTTAACCCACCACCAGATC
TACCCTGTGACTCAGCCACTTGCCCCAGTTCATAACCCATTAGTGTC

ACGCGTACGCGGCGCTCGAG - GFP Tag - GTTTAA



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Protein Sequence: >RG223777 representing NM_001891
 Red=Cloning site Green=Tags(s)

MKVLILACLVALALARETIESLSSESSESITEYKQKVEKVKHEDQQQGEDEHQDKIYPSFQPQPLIYPFVE
 PIPYGFLLPQNILPLAQPAVVLPVPQPEIMEVPKAKDVTYTKGRVMPVLKSPTIPFFDPQIPKLTDLLENLH
 LPLPLLQPLMQQVPQPIPQTLALPPQPLWSVPQPKVLPVLPQVVPYPQRAVPVQALLLNQELLLNPTHQI
 YPVTQPLAPVHNPISV

TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_001891

ORF Size: 678 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_001891.3](#)

RefSeq Size: 1065 bp

RefSeq ORF: 681 bp

Locus ID: 1447

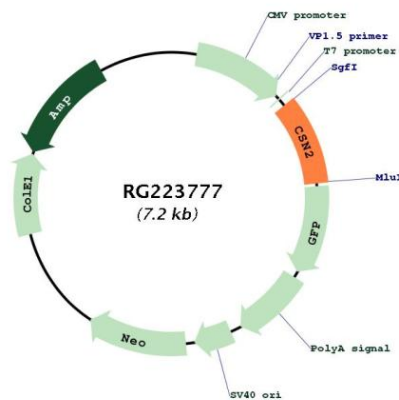
UniProt ID: [P05814](#)

Cytogenetics: 4q13.3

Protein Families: Secreted Protein

Gene Summary: This gene is a member of the beta casein family. There are two types of casein protein, beta (encoded by this gene) and kappa, both of which are secreted in human milk. Beta casein is the principal protein in human milk and the primary source of essential amino acids for a suckling infant. Beta and kappa casein proteins acting together form spherical micelles which bind within them important dietary minerals, such as calcium and phosphorous. In addition, the C-terminal 14 aa of the protein has antimicrobial activity, especially in preterm milk, displaying antibacterial activity against *S. aureus* and *Y. enterocolitica*. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Jul 2020]

Product images:



Circular map for RG223777