

Product datasheet for **RG228507**

Calpain 2 (CAPN2) (NM_001146068) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Calpain 2 (CAPN2) (NM_001146068) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Calpain 2
Synonyms:	CANP2; CANPL2; CANPml; mCANP
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>RG228507 representing NM_001146068
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**GCGATCGCC**

ATGGAGATCTGCGCTGACCCCCAGTTTATCATTGGAGGAGCCACCCGCACAGACATCTGCCAAGGAGCCC
 TGGGTGACTGCTGGCTGCTGGCAGCCATTGCCTCCCTCACCTTGAATGAAGAAATCCTGGCTCGAGTCGT
 CCCCCTAAACCAGAGCTTCCAGGAAAATATGCAGGGATCTTCACTTCCAGTTCTGGCAATACGGCGAG
 TGGGTGGAGGTGGTGGTGGATGACAGGCTGCCACCAAGGACGGGGAGCTGCTTTTGTGATTAGCCG
 AAGGGAGCGAGTTCTGGAGCGCCCTGCTGGAGAAGGCATACGCCAAGATCAACGGATGCTATGAAGCGCT
 ATCAGGGGGTCCACCACTGAGGGCTTCAAGACTTACCAGGAGGCTGCTGAGTGGTATGAGTTGAAG
 AAGCCCCCTCCCAACCTGTTCAAGATCATCCAGAAAGCTCTGCAAAAAGGCTCTCTCCTTGGCTGCTCCA
 TCGACATACCCAGCGCCGCGACTCGGAGGCCATCACGTTTCAAGAGCTGGTGAAGGGGCACGCGTACTC
 GGTACCCGGAGCCGAGGAGGTTGAAAGTAAACGGAAGCCTACAGAACTGATCCGCATCCGAAATCCCTGG
 GGAGAAGTGGAGTGGACAGGGCGGTGGAATGACAACCTGCCAAGCTGGAACACTATAGACCCAGAGGAGA
 GGGAAAGGCTGACCAGACGGCATGAAGATGGAGAATTCTGGATGTCTTTCAGTGACTTCTGAGGACTA
 TTCCCGCTGGAGATCTGTAACCTGACCCAGACACTCTCACCAGCGATACCTACAAGAAGTGGAAACTC
 ACCAAAATGGATGGGAAGTGGAGGCGGGCTCCACCGCGGAGGTTGCAGGAACTACCCGAACACATTCT
 GGATGAACCTCAGTACCTGATCAAGCTGGAGGAGGAGGATGAGGACGAGGAGGATGGGGAGAGCGGCTG
 CACCTTCTGGTGGGCTCATTGAGAAGCACCGACGGCGCAGAGGAAGTGGGGAGGACATGCACACC
 ATCGGCTTTGGCATCTATGAGGTTCCAGAGGATTAAGTGGGCAGACCAACATCCACCTCAGCAAAAAT
 TCTTCTGACGAATCGCGCAGGAGCGCTCAGACACCTTCATCAACCTCCGGGAGGTGCTCAACCGCTT
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 TGCGGAGATCTCTGCCTTGGAGCTGCAGACCATCTGAGAAGGTTCTAGCAAAGCGCCAAGATATCAAG
 TCAGATGGCTTACGATCGAGACATGCAAAATTATGGTTGACATGCTAGATTCCGACGGGAGTGGCAAGC
 TGGGGCTGAAGGAGTTCTACATTCTCTGGACGAAGATTCAAAAATACCAAAAATTTACCAGAAAATCGA
 CGTTGACAGGTCTGGTACCATGAATTCCTATGAAATGCGGAAGGCATTAGAAGAAGCAGGTTTCAAGATG
 CCCTGTCAACTCCACCAAGTCATCGTTGCTCGGTTTGCAGATGACCAGCTCATCATCGATTTTGATAATT
 TTGTTCCGGTGTGGTTCGGCTGGAAACGCTATTCAAGATATTTAAGCAGCTGGATCCCAGAACTACTGG
 AACAAATAGAGCTCGACCTTATCTCTTGGCTCTGTTTCTCAGTACTT

AG**GCGACCG**ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

>RG228507 representing NM_001146068
 Red=Cloning site Green=Tags(s)

MEICADPQFIIGGATRTDICQALGDCWLLAAIASLTLNEEILARVVPLNQSFQENYAGIFHFQFWQYGE
 WVEVVVDDRLPTKDGELLFVHSAEGSEFWSALLEKAYAKINGCYEALSGGATTEGFEDFTGGIAEWYELK
 KPPPNLFKIIQKALQKGSLLGCSIDITSAADSEAITFQKLVKGHAYSVTGAEVEVSNGLQKLRIRNPW
 GEVWETGRWVNDNCPNIDPEERERLRRRHEDGEFWSFSDFLRHYSRLEICNLTPTDLTSDTYKWKWL
 TKMDGNWRRGSTAGGCRNYPNTFWMNPQYLKLEEEDEDEEDGESGCTFLVGLIQKRRRRQRKMGEDMHT
 IGFGIYEVPEELSGQTNLHLSKNFFLTNRARERSDTFINLREVLNRFKLPPEYILVPSTFEPNKDGFDC
 IRVFSEKKADYQAVDDEIEANLEEFDISEDDIDDGFRRLLFAQLAGEDAEISAFELQTLRRVLAQRQDIK
 SDGFSIETCKIMVDMLSDSGSKLGLKEFYILWTKIQKYQKIYREIDVDRSGTMNSYEMRKALEEAGFKM
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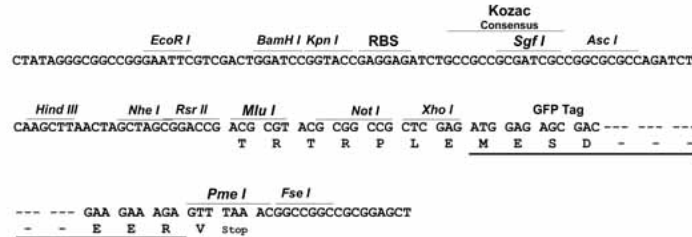
SGP**TRRRLE** - GFP Tag - V

Restriction Sites:

Sgfl-RsrII

Cloning Scheme:

Cloning sites used for ORF Shuttling:


ACCN: NM_001146068

ORF Size: 1866 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_001146068.1](#), [NP_001139540.1](#)
RefSeq Size: 3270 bp

RefSeq ORF: 1869 bp

Locus ID: 824

UniProt ID: [P17655](#)

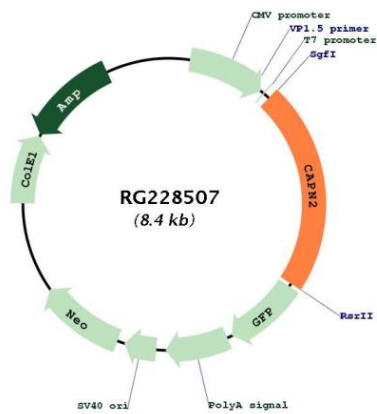
Cytogenetics: 1q41

Protein Families: Druggable Genome, Protease

Protein Pathways: Alzheimer's disease, Apoptosis, Focal adhesion

Gene Summary: The calpains, calcium-activated neutral proteases, are nonlysosomal, intracellular cysteine proteases. The mammalian calpains include ubiquitous, stomach-specific, and muscle-specific proteins. The ubiquitous enzymes consist of heterodimers with distinct large, catalytic subunits associated with a common small, regulatory subunit. This gene encodes the large subunit of the ubiquitous enzyme, calpain 2. Multiple heterogeneous transcriptional start sites in the 5' UTR have been reported. Two transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Mar 2009]

Product images:



Circular map for RG228507