

Product datasheet for **RG205642**

Calpain 2 (CAPN2) (NM_001748) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Calpain 2 (CAPN2) (NM_001748) 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:

>RG205642 representing NM_001748
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGCGGGCATCGCGCCAAGCTGGCGAAGGACCGGGAGCGGCCGAGGGGCTGGCTCCCACGAGAGGG
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 GGACCCGTCCTTCCCGGCCATCCCTCGGCCCTGGGCTTCAAGGAGTTGGGGCCCTACTCCAGAAAACC
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 AGCTCATCATCGATTTTGATAATTTTGTTCGGTGTGGTTTCGGCTGAAACCGCTATTCAAGATATTTAA
 GCAGCTGGATCCCGAGAATACTGGAACAATAGAGCTCGACCTTATCTCTTGGCTCTGTTTCTCAGTACTT

AGCGGACCGACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

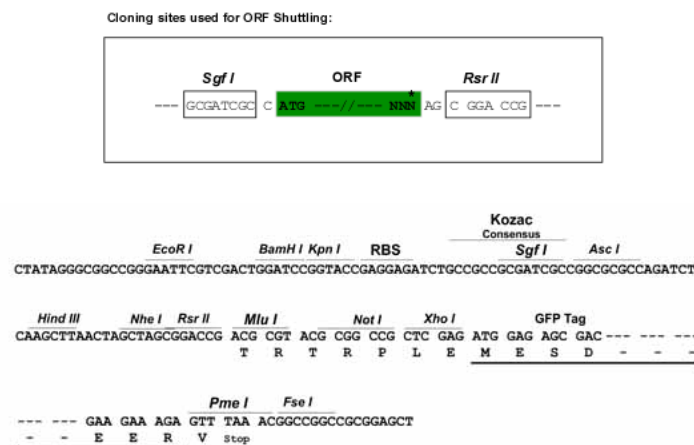
Protein Sequence: >RG205642 representing NM_001748
Red=Cloning site Green=Tags(s)

MAGIAAKLAKDREAAEGLGSHERAIKYLNQDYEARNECLEAGTLFQDPSFPAIPALGFKELGPYSSKT
 RGIEWKRPTEICADPQFIIGGATRTDICOQALGDCWLLAAIASLTLNEELARVVPLNQSFQENYAGIFH
 FQFQWYGEWVEVVVDDRLPTKDGELLFVHSAEGSEFWSALLEKAYAKINGCYEALSGGATTEGFEDFTGG
 IAEWYELKKPPNLFKIIQKALQKGSLLGCSIDITSAADSEAITFQKLKVGHAYSVTGAEVEVSNGLQK
 LIRIRNPWGEVEWTGRWVNDNCPVWNTIDPEERERLRRHEDGEFWSFDFLRHYSRLEICNLTPDTLTS
 DTYKKWKLTKMDGNWRRGSTAGGCRNYPNTFWMNPQYLKLEEEDEEEDGESGCTFLVGLIQKHRRRQR
 KMGEDMHTIGFGIYEVPEELSGQTNIHLSKNFFLTNRARERSDTFINLREVLNRFKLPPEYILVPSTFE
 PNKDGDFCIRVSEKKADYQAVDDEIEANLEEFDISEDDIDDGFRRLFAQLAGEDAEISAFELQILRRV
 LAKRQDIKSDGFSIETCKIMVDMLDSDGSGKLGKLFYILWTKIQKYQKIYREIDVDRSGTMNSYEMRKA
 LEEAGFKMPCQLHQVIVARFADDQLIIDFDFVRLVRLVLETLFKIFKQLDPENTGTIELDLISWLCFSVL

SGPTRRRLE - GFP Tag - V

Restriction Sites: SgfI-RsrII

Cloning Scheme:



ACCN: NM_001748

ORF Size: 2100 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_001748.3](#), [NP_001739.1](#)

RefSeq Size: 3419 bp

RefSeq ORF: 2103 bp

Locus ID: 824

UniProt ID: [P17655](#)

Cytogenetics: 1q41

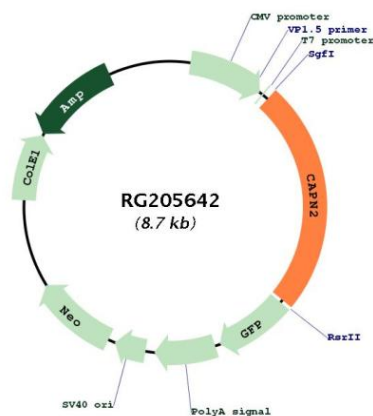
Domains: Calpain_III, EFh

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 RG205642