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Product datasheet for RG224179

Calpain 10 (CAPN10) (NM_023085) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Tag:	TurboGFP
Symbol:	Calpain 10
Synonyms:	CANP10; NIDDM1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)

ORF Nucleotide Sequence:

>RG224179 representing NM_023085
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGCGGGCGGGCCGGGGCGCGACGCCGGCGAGGGAGCTGTTCCGGGACGCCGCCTTCCCCGCCGCGGACT
CCTCGCTCTTCTGCGACTTGTCTACGCCGCTGGCCCAGTTCCGCGAGGACATCACGTGGAGGCGGCCCCA
GGAGATTTGTGCCACACCCCGGCTGTTTCCAGATGACCCACGGGAAGGGCAGGTGAAGCAGGGGCTGCTG
GGGGATTGCTGGTTCCTGTGTGCCTGCGCCGCGCTGCAGAAGAGCAGGCACCTCCTGGACCAGGTCATTC
CTCCGGGACAGCCGAGCTGGGCCGACCAGGAGTACCGGGGCTCCTTCACCTGTCGCATTTGGCAGTTTGG
ACGCTGGGTGGAGGTGACCACAGATGACCGCCTGCCGTGCCTTGCAGGGAGACTCTGTTTCTCCCGCTGC
CAGAGGGAGGATGTGTTCTGGCTCCCCTTACTGGAAAAGGTCTACGCCAAGGTCCATGGGTCCTACGAGC
ACCTGTGGGCCGGGCAGGTGGCGGATGCCCTGGTGGACCTGACCGGCGGCCTGGCAGAAAGATGGAACCT
GAAGGGCGTAGCAGGAAGCGGAGGCCAGCAGGACAGGCCAGGCCGCTGGGAGCACAGGACTTGTCGGCAG
CTGCTCCACCTGAAGGACCAGTGTCTGATCAGCTGCTGCGTGCTCAGCCCCAGAGCAGGTGCCCGGGAGC
TGGGGGAGTTCCATGCCTTCATTGTCTCGGACCTGCGGGAGCTCCAGGGTCAGGCGGGCCAGTGCATCCT
GCTGCTGCGGATCCAGAACCCCTGGGGCCGGCGGTGCTGGCAGGGGCTCTGGAGAGAGGGGGGTGAAGGG
TGGAGCCAGGTAGATGCAGCGGTAGCATCTGAGCTCCTGTCCCAGCTCCAGGAAGGGGAGTTCTGGGTGG
AGGAGGAGGAGTTCCTCAGGGAGTTTGACGAGCTCACCGTTGGCTACCCGGTCACGGAGGCCGGCCACCT
GCAGAGCCTCTACACAGAGAGGCTGCTCTGCCATACGCGGGCGCTGCCTGGGGCCTGGGTCAAGGGCCAG
TCAGCAGGAGGCTGCCGGAACAACAGCGGCTTTCCCAGCAACCCCAAATTCTGGCTGCGGGTCTCAAAAC
CGAGTGAGGTGTACATTGCCGTCCTGCAGAGATCCAGGCTGCACGCGGCGGACTGGGCAGGCCGGGCCCG
GGCACTGGTGGGTGACAGTCATACTTCGTGGAGCCCAGCGAGCATCCCGGGCAAGCACTACCAGGCTGTG
GGTCTGCACCTCTGGAAGGTCCCAGAGGGTGGAAGGAGCCAGGACGCACCCCCACTGCTGCTGCAGGAGC
CGCTGCTGAGCTGCGTGCCACATCGCTACGCCCAGGAGGTGAGCCGGCTCTGCCTCCTGCCTGCAGGCAC
CTACAAGGTTGTGCCCTCCACCTACCTGCCGGACACAGAGGGGGCCTTCACAGTGACCATCGCAACCAGG
ATTGACAGGCCATCCATTCACAGCCAGGAGATGCTGGGCCAGTTCCTCCAAGAGGTCTCCGTCATGGCAG
TGATGAAAACC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

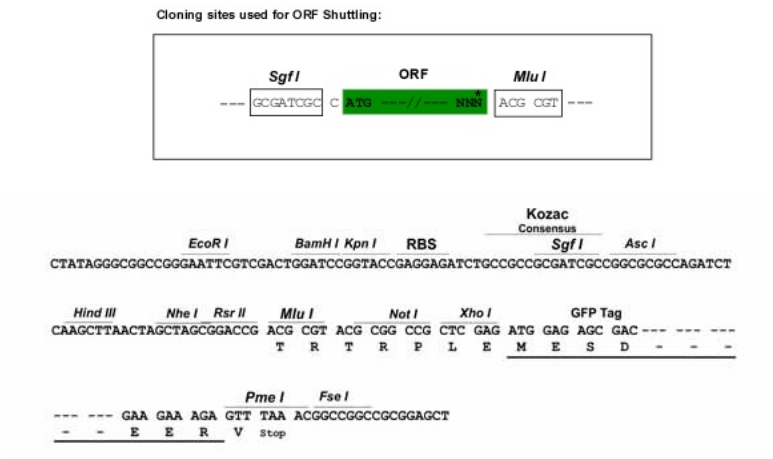
>RG224179 representing NM_023085
Red=Cloning site Green=Tags(s)

MRAGRGATPARELFRDAAFPAADSSLFCDLSTPLAQFREDITWRRPQEICATPRLFPDDPREGQVKQGLL
GDCWFLCACAALQKSRHLLDQVIPPGQPSWADQEYRGSFTCRIWQFGRWVEVTTDDRLPCLAGRLCFSRC
QREDVFWLPLLEKVYAKVHGSYEHLWAGQVADALVDLTGGLAERWNLKGVAGSGGQQDRPGRWEHRTCRQ
LLHLKDQCLISCCVLSPRAGARELGEFHAFIVSDLRELQGQAGQCILLLRIQNPWGRRCWQGLWREGGEG
WSQVDAAVASELLSQLQEGEFWVEEEEFLREFDELTVGYPVTEAGHLQSLYTERLLCHTRALPGAWVKGQ
SAGGCRNNSGFPSNPKFWLRVSKPSEVYIAVLQRSRLHAADWAGRARALVGDSHTSWSPASIPGKHYQAV
GLHLWKVPEGGRSQDAPPLLLQEPLLSCVPHRYAQEVSRLCLLPAGTYKVVPSTYLPDTEGAFTVTIATR
IDRPSIHSQEMLGQFLQEVSVMAVMKT

TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_023085

ORF Size: 1551 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.

Note: Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

RefSeq: NM_023085.1, NP_075573.1

RefSeq Size: 2154 bp

RefSeq ORF: 1554 bp

Locus ID: 11132

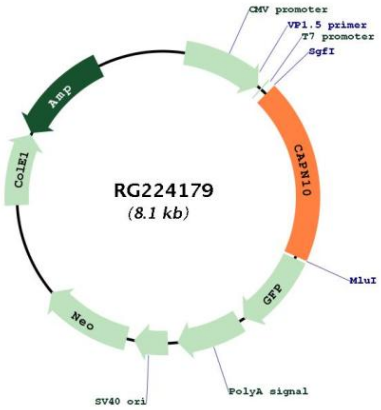
UniProt ID: Q9HC96

Cytogenetics: 2q37.3

Protein Families: Druggable Genome, Protease

Gene Summary: Calpains represent a ubiquitous, well-conserved family of calcium-dependent cysteine proteases. The calpain proteins are heterodimers consisting of an invariant small subunit and variable large subunits. The large catalytic subunit has four domains: domain I, the N-terminal regulatory domain that is processed upon calpain activation; domain II, the protease domain; domain III, a linker domain of unknown function; and domain IV, the calmodulin-like calcium-binding domain. This gene encodes a large subunit. It is an atypical calpain in that it lacks the calmodulin-like calcium-binding domain and instead has a divergent C-terminal domain. It is similar in organization to calpains 5 and 6. This gene is associated with type 2 or non-insulin-dependent diabetes mellitus (NIDDM), and is located within the NIDDM1 region. Multiple alternative transcript variants have been described for this gene. [provided by RefSeq, Sep 2010]

Product images:



Circular map for RG224179