

## Product datasheet for **RG212322**

### **CAPNS1 (NM\_001749) Human Tagged ORF Clone**

#### Product data:

Product Type:	Expression Plasmids
Product Name:	CAPNS1 (NM_001749) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	CAPNS1
Synonyms:	CALPAIN4; CANP; CANPS; CAPN4; CDPS; CSS1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG212322 representing NM_001749 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGC**C

ATGTTCTGGTTAACTCGTTCTTGAAGGGCGGCGGCGGCGGGGAGGCGGGGCGCTGGGTGGG  
GCCTGGGAAATGTGCTTGGAGGCCTGATCAGCGGGGCCGGGGCGGCGGCGGGCGGGCGGGCGGCGG  
CGGTGGTGGAGGCGGCGGTGGCGGTGGAACGGCCATGCGCATCCTAGCGGAGTCATCAGCGCCATCAGC  
GAGGCGGCTGCGCAGTACAACCCGGAGCCCCGCCACGCACACATTACTCCAACATTGAGGCCAACG  
AGAGTGAGGAGGTCCGGCAGTCCGGAGACTCTTTGCCAGCTGGCTGGAGATGACATGGAGGTCAGCGC  
CACAGAACTCATGAACATTCTCAATAAGGTTGTGACACGACCCCTGATCTGAAGACTGATGGTTTTGGC  
ATTGACACATGTGCGCAGCATGGTGGCCGTGATGGATAGCGACACCACAGGCAAGCTGGGCTTTGAGGAAT  
TCAAGTACTTGTGGAACAACATCAAAGGTGGCAGGCCATATACAAACAGTTCGACACTGACCGATCAGG  
GACCATTTGCAGTAGTGAACCTCCAGGTGCCTTTGAGGCAGCAGGGTTCCACCTGAATGAGCATCTCTAT  
AACATGATCATCCGACGCTACTCAGATGAAAGTGGGAACATGGATTTTGACAACTTCATCAGCTGCTTGG  
TCAGGCTGGACGCCATGTTCCGTGCCTTCAAATCTCTTGACAAAGATGGCACTGGACAAATCCAGGTGAA  
CATCCAGGAGTGGCTGCAGCTGACTATGTATTCC

**ACGCGT**ACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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**Protein Sequence:** >RG212322 representing NM\_001749  
 Red=Cloning site Green=Tags(s)

MFLVNSFLKGGGGGGGGGGGLGGGLGNVLGGLISGAGGGGGGGGGGGGGGGGGGTAMRILGGVISAI  
 EAAAQYNPEPPPPRTHYSNIEANESEEVQRFRRLFAQLAGDDMEVSATELMNILNKVVTRHPDLKTDGFG  
 IDTCRSMVAVMDSDTTGLGFEEFKYLWNNIKRWQAIYKQFDTRSGTICSELPGAFAAGFHLNEHLY  
 NMIIRRYSDSEGNMDFDNFISCLVRLDAMFRAFKSLDKDGTGQIQVNIQEWLQLTMYS

TRTRPLE - GFP Tag - V

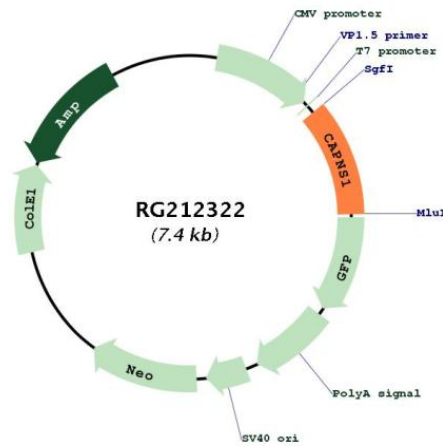
**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shutting:



**Plasmid Map:**



**ACCN:** NM\_001749

**ORF Size:** 804 bp

<b>OTI Disclaimer:</b>	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. <a href="#">More info</a>
<b>OTI Annotation:</b>	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>RefSeq:</b>	<a href="#">NM_001749.4</a>
<b>RefSeq Size:</b>	1492 bp
<b>RefSeq ORF:</b>	807 bp
<b>Locus ID:</b>	826
<b>UniProt ID:</b>	<a href="#">P04632</a>
<b>Cytogenetics:</b>	19q13.12
<b>Domains:</b>	EFh
<b>Protein Families:</b>	Druggable Genome, Protease
<b>Gene Summary:</b>	<p>This gene is a member of the calpain small subunit family. Calpains are calcium-dependent cysteine proteinases that are widely distributed in mammalian cells. Calpains operate as heterodimers, comprising a specific large catalytic subunit (calpain 1 subunit in Calpain I, and calpain 2 subunit in Calpain II), and a common small regulatory subunit encoded by this gene. This encoded protein is essential for the stability and function of both calpain heterodimers, whose proteolytic activities influence various cellular functions including apoptosis, proliferation, migration, adhesion, and autophagy. Calpains have been implicated in neurodegenerative processes, such as myotonic dystrophy. A pseudogene of this gene has been defined on chromosome 1. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Oct 2014]</p>