

Product datasheet for **RG216300**

Caspase 8 (CASP8) (NM_001080125) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Caspase 8 (CASP8) (NM_001080125) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	CASP8
Synonyms:	ALPS2B; CAP4; Casp-8; FLICE; MACH; MCH5
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>RG216300 representing NM_001080125
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGGAGGGAGGCAGAAGAGCCAGGGTGGTTATTGAAAGTAAAAGAACTTCTCCTGGGAGCCTTTCCCA
 CCCCTTCCCTGCTGAGCACGTGGAGTTAGGCAGGTTAGGGGACTCGGAGACTGCGATGGTGCCAGGAAA
 GGGTGGAGCGGATTATATTCTCCTGCCTTTTAAAAAGATGGACTTCAGCAGAAATCTTTATGATATTGGG
 GAACAACCTGGACAGTGAAGATCTGGCCTCCCTCAAGTTCCTGAGCCTGGACTACATTCGCAAGGAAGC
 AAGAACCATCAAGGATGCCTTGATGTTATTCCAGAGACTCCAGGAAAAGAGAATGTTGGAGGAAAGCAA
 TCTGTCTTCTGAAGGAGCTGCTTCCGAATTAATAGACTGGATTTGCTGATTACCTACCTAAACACT
 AGAAAGGAGGAGATGAAAGGGAACCTCAGACACCAGGCAGGGCTCAAATTTCTGCCTACAGGGTCATGC
 TCTATCAGATTTCAGAAGAAGTGAAGATCAGAAATGAGGTCTTTAAGTTTCTTTTCAAGAGGAAAT
 CTCCAAATGCAAACTGGATGATGACATGAACCTGCTGGATATTTTCATAGAGATGGAGAAGAGGGTCATC
 CTGGGAGAAGGAAAGTTGGACATCTGAAAAGAGTCTGTGCCAAATCAACAAGAGCCTGCTGAAGATAA
 TCAACGACTATGAAGAATTCAGCAAAGAGAGAAGCAGCAGCCTTGAAGGAAGTCCTGATGAATTTTCAAA
 TGGGGAGGAGTTGTGTGGGGTAATGACAATCTCGGACTCTCAAGAGAACAGGATAGTGAATCACAGACT
 TTGGACAAAGTTTACCAATGAAAAGCAAACTCGGGGACTGTCTGATCATCAACAATCACAATTTTG
 CAAAAGCACGGGAGAAAGTGCCCAACTTCACAGCATTAGGGACAGGAATGGAACACACTTGGATGCAGG
 GGCTTTGACCACGACCTTTGAAGAGCTTCATTTGAGATCAAGCCCCACGATGACTGCACAGTAGAGCAA
 ATCTATGAGATTTGAAAATCTACCAACTCATGGACCACAGTAAATGGACTGCTTATCTGCTGTATCC
 TCTCCCATGGAGACAAGGGCATCATCTATGGCACTGATGGACAGGAGGCCCCCATCTATGAGCTGACATC
 TCAGTTCACTGGTTTGAAGTGCCCTTCCCTTGCTGGAAAACCCAAAGTGTTTTTTTATTCAGGCTTGTGAG
 GGGGATAACTACCAGAAAGGTATACCTGTTGAGACTGATTCAGAGGAGCAACCCTATTTAGAAATGGATT
 TATCATCACCTCAAACGAGATATATCCCGGATGAGGCTGACTTTCTGCTGGGGATGGCCACTGTGAATAA
 CTGTGTTTCTACCGAAACCCTGCAGAGGGAACCTGGTACATCCAGTCACTTTGCCAGAGCCTGAGAGAG
 CGATGCTCTCGAGGCGATGATATTCTCACCATCCTGACTGAAGTGAAGTGAAGTAAGCAACAAGGATG
 ACAAGAAAACATGGGAAACAGATGCCTCAGCCTACTTTCACACTAAGAAAAAACTTGTCTTCCCTTC
 TGAT

ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTTAA

Protein Sequence:

>RG216300 representing NM_001080125
 Red=Cloning site Green=Tags(s)

MEGRRARVVIESKRNFLLGAFPTPFAEHVELGRLGDSETAMVPGKGGADYILLPFKMDFSRNLIDYDIG
 EQLDSEDLASLKFSLDYIPQRKQEPKDALMLFQRLQEKRMLEESNLSFLKELLFRINRLDLLITYLNT
 RKEEMERELQTPGRAQISAYRVMLYQISEEVSRSSELRSEKFLQEEISKCKLDDMNLLDIFIEMEKRVI
 LGEGKLDILKRVCAQINKSLLKIINDYEEFSKERSSSLEGPDEFNGEELCGVMTISDSPREQDSESQT
 LDKVYQMKSKPRGYCLINNHFAKAREKVPKLHSIRDRNGTHLDAGALTTTFFELHFEIKPHDDCTVEQ
 IYEILKIYQLMDHSNMDCFICCLSHGDKGIYGTGQEAPIYELTSQFTGLKCPFLAGPKVFFIQACQ
 GDNYQKGIPIVETDSEEQPYLEMDLSSPQTRYIPDEADFLMGMATVNNCVSYRNPAAEGTWYIQSLCQSLRE
 RCPRGDDILITLTVNYEVSNDKDDKKNMGKQMPQPTFTLRKKLVFSPD

TRTRPLE – GFP Tag – V

Restriction Sites:

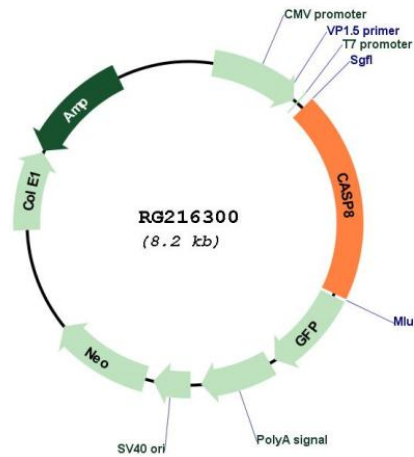
Sgfl-MluI

Cloning Scheme:

Cloning sites used for ORF Shutting:



Plasmid Map:



ACCN:	NM_001080125
ORF Size:	1614 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:	<ol style="list-style-type: none">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_001080125.2
RefSeq Size:	2938 bp
RefSeq ORF:	1617 bp
Locus ID:	841
UniProt ID:	Q14790
Cytogenetics:	2q33.1
Protein Families:	Druggable Genome, Protease
Protein Pathways:	Alzheimer's disease, Apoptosis, Huntington's disease, NOD-like receptor signaling pathway, p53 signaling pathway, Pathways in cancer, RIG-I-like receptor signaling pathway, Toll-like receptor signaling pathway, Viral myocarditis

Gene Summary:

This gene encodes a member of the cysteine-aspartic acid protease (caspase) family. Sequential activation of caspases plays a central role in the execution-phase of cell apoptosis. Caspases exist as inactive proenzymes composed of a prodomain, a large protease subunit, and a small protease subunit. Activation of caspases requires proteolytic processing at conserved internal aspartic residues to generate a heterodimeric enzyme consisting of the large and small subunits. This protein is involved in the programmed cell death induced by Fas and various apoptotic stimuli. The N-terminal FADD-like death effector domain of this protein suggests that it may interact with Fas-interacting protein FADD. This protein was detected in the insoluble fraction of the affected brain region from Huntington disease patients but not in those from normal controls, which implicated the role in neurodegenerative diseases. Many alternatively spliced transcript variants encoding different isoforms have been described, although not all variants have had their full-length sequences determined. [provided by RefSeq, Jul 2008]