

Product datasheet for **SC325147**

Calcineurin A (PPP3CA) (NM_001130691) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Calcineurin A (PPP3CA) (NM_001130691) Human Untagged Clone
Tag:	Tag Free
Symbol:	Calcineurin A
Synonyms:	ACCIID; CALN; CALNA; CALNA1; CCN1; CNA1; IECEE; IECEE1; PPP2B
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL4</u>
E. coli Selection:	Ampicillin (100 ug/mL)



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Fully Sequenced ORF: >OriGene sequence for NM_001130691 edited
 AGAAAATAAATAAATAACCACCACACACGCGCAGCCCGGAGCGAGTCGGCGGGGCTGGCG
 GCAGCGGCGGAGGAGGAGTGAAGGCGGCGGCGGAGGAGGGACGCGCGGAAAAGGCAG
 CAACTTTAAAGCCAGCTCAGAGCCTAGACCTCCAGCCGAGTGGTTTGACGCGGCGGGCG
 GCGGCGGCGGCGGCGGCGGCGGCGGTTGAGTGTCTGGCCCGCCGGTCCGGTCCGGGTGTGC
 AGTCGGACGACGAGCAGCGCGTCTCCTCCGGCAGCTGGAGATGTCGAGCCCAAG
 GCAATTGATCCCAAGTTGTCGACGACCGACAGGGTGGTAAAGCTGTTCCATTTCTCCA
 AGTCACCGGCTTACAGCAAAAAGAAGTGTGATAATGATGGAAAACCTCGTGTGGATATC
 TTAAGGCGCATCTTATGAAGGAGGGAAGGCTGGAAGAGAGTGTGCAATTGAGAATAATA
 ACAGAGGGTGCATCAATTCTTCGACAGGAAAAAATTTGCTGGATATTGATGCGCCAGTC
 ACTGTTTGTGGGACATTCATGGACAATCTTTGATTTGATGAAGCTCTTTGAAGTCGGG
 GGATCTCCTGCCAACACTCGCTACCTCTTCTTAGGGGACTATGTTGACAGAGGGTACTTC
 AGTATTGAATGTGTGCTGATTTGTGGCCCTTAAAAATCTCTACCCAAAAACACTGTTT
 TTACTTCGTGAAATCATGAATGTAGACATCTAACAGAGTATTTACATTTAAACAAGAA
 TGTAATAAAGTATTCAGAACGCGTATATGATGCCTGTATGGATGCCTTTGACTGCCTT
 CCCTGGCTGCCCTGATGAACCAACAGTTCCTGTGTGTGATGGTGGTTTGTCTCCAGAG
 ATTAACACTTTAGATGATATCAGAAAATTAGACCGATTCAAAGAACCACCTGCATATGGA
 CCTATGTGTGATATCCTGTGGTCAGACCCCTGGAAGATTTTGGAAATGAGAAGACTCAG
 GAACATTTCACTCACAACACAGTCAGGGGGTGTTCATACTTCTACAGTTACCCGGCTGTA
 TGTGAATCTTACAGCACAATAACTTGTATCTATACTCCGAGCCACGAAGCCCAAGAT
 GCAGGGTACCGCATGTACAGGAAAAGCCAAACAACAGGCTTCCCTTCTCTAATTACAATT
 TTTTCAGCACAAATTAAGTGTATACAATAACAAAGCTGCAGTATTGAAGTATGAG
 AACAAATGTTATGAATATCAGGCAATCAACTGTTCTCCTCATCCATACTGGCTTCCAAT
 TTCATGGATGTTTTTACTTGGTCCCTTCCATTTGTTGGGAAAAAAGTACTGAGATGCTG
 GTAATGTCTCAACATCTGCTCAGATGATGAACTAGGGTCAGAAGAAGTGGATTTGAT
 GGTGCAACAGCTGCAGCCCGGAAAGAGGTGATAAGGAACAAGATCCGAGCAATAGGCAAA
 ATGGCCAGAGTGTCTCAGTGCTCAGAGAAGAGAGTGAAGTGTGCTGACGCTGAAAGGC
 TTGACCCCAACTGGCATGCTCCCGAGGAGTACTTTCTGGAGGGAAGCAAAACCTGCAA
 AGCGCTATCAAAGGATTTTACCACAACATAAGATCACTAGCTTCGAGGAAGCCAAGGGC
 TTAGACCGAATTAATGAGAGGATGCCGCTCGCAGAGATGCCATGCCCTCTGACGCCAAC
 CTTAACTCCATCAACAAGGCTCTCACCTCAGAGACTAACGGCACGACAGCAATGGCAGT
 AATAGCAGCAATATTCAGTGACCACTTCCCTGTTCACTTTTTTTTTTTTTTTTTTTTTT
 TTTTGAGCTGCGGGGCATGATGGGGATTGCTGCATATCAGCAGTTGGATGTTCTTGCCTC
 TGACAGTAGCTTATTTGCTCTGGGGCCAGGAATTGGATTACAGTTTACACTATCATTAAA
 AAAGAGGGAGAGAGATAATAAATATATTTTGGTGGGGATGGTGATTAACACCTCTTTT
 GGGTATGCCTTTTAAAAATGCTTATAGAGAAAAAATTTTAAAAAGAAAGCTAATGCTA
 GTATACTGCAATGTTAGGGGAATGAACATGTTTTCTACTGCATTGGGGACTTCTAGA
 TAGGTTAATGAAAGGCCTTTTATTCTGTTACTGGACATGAAAACCTTTGTCTAATTTCTTA
 CTCTATTGTACGTTTACAGTCGACGACTAAAAATGGATGACATCAAACATTTTTAACAA
 AATGATGTACAACTAAGGACTATTTATTGATAATGTTTTGCTACTCTTGTGACACAATG
 GCTATAAACTGAATTAGGCAGTCTTAAAAA

Restriction Sites: NotI-NotI
ACCN: NM_001130691
Insert Size: 2400 bp
OTI Disclaimer: Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).

OTI Annotation:	The ORF of this clone has been fully sequenced and found to be a perfect match to NM_001130691.1.
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:	<u>NM_001130691.1, NP_001124163.1</u>
RefSeq Size:	4646 bp
RefSeq ORF:	1536 bp
Locus ID:	5530
UniProt ID:	<u>Q08209</u>
Cytogenetics:	4q24
Protein Families:	Druggable Genome, Phosphatase
Protein Pathways:	Alzheimer's disease, Amyotrophic lateral sclerosis (ALS), Apoptosis, Axon guidance, B cell receptor signaling pathway, Calcium signaling pathway, Long-term potentiation, MAPK signaling pathway, Natural killer cell mediated cytotoxicity, Oocyte meiosis, T cell receptor signaling pathway, VEGF signaling pathway, Wnt signaling pathway

Gene Summary:

Calcium-dependent, calmodulin-stimulated protein phosphatase which plays an essential role in the transduction of intracellular Ca(2+)-mediated signals (PubMed:15671020, PubMed:18838687, PubMed:19154138, PubMed:23468591). Many of the substrates contain a PxlIT motif and/or a LxVP motif (PubMed:17498738, PubMed:17502104, PubMed:23468591, PubMed:27974827, PubMed:22343722). In response to increased Ca(2+) levels, dephosphorylates and activates phosphatase SSH1 which results in cofilin dephosphorylation (PubMed:15671020). In response to increased Ca(2+) levels following mitochondrial depolarization, dephosphorylates DNMT1L inducing DNMT1L translocation to the mitochondrion (PubMed:18838687). Dephosphorylates heat shock protein HSPB1 (By similarity). Dephosphorylates and activates transcription factor NFATC1 (PubMed:19154138). In response to increased Ca(2+) levels, regulates NFAT-mediated transcription probably by dephosphorylating NFAT and promoting its nuclear translocation (PubMed:26248042). Dephosphorylates and inactivates transcription factor ELK1 (PubMed:19154138). Dephosphorylates DARPP32 (PubMed:19154138). May dephosphorylate CRT2 at 'Ser-171' resulting in CRT2 dissociation from 14-3-3 proteins (PubMed:30611118).[UniProtKB/Swiss-Prot Function]

Transcript Variant: This variant (2) lacks an in-frame exon in the 3' coding region, compared to variant 1, and encodes a shorter protein (isoform 2), compared to isoform 1.