

Product datasheet for SC313096

C3orf37 (HMCES) (NM_020187) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	C3orf37 (HMCES) (NM_020187) Human Untagged Clone
Tag:	Tag Free
Symbol:	C3orf37
Synonyms:	C3orf37; DC12; SRAPD1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Fully Sequenced ORF:	>SC313096 representing NM_020187. Blue=Insert sequence Red=Cloning site Green=Tag(s)

GCTCGTTTAGTGAACCGTCAGAATTTTGAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTG
 GATCCGGTACCGAGGAGATCTGCCGCC**CGCATCGCC**
 ATGTGTGGGCGAACATCCTGTCACTTACCTAGAGATGTTCTCACGAGAGCTTGCGCTACCAGGATCGG
 CGGGGCCAGCAGCGGCTCCCGAGTGGAGGGACCCTGATAAGTACTGCCCTCTTACAACAAGAGTCCT
 CAATCCAACAGCCAGTGCTTCTGTCTCGACTGCACTTTGAGAAGGATGCAGACTCATCTGAGCGTATC
 ATTGCTCCCATGCGCTGGGGCTTGGTCCCTTCTTGGTTCAAAGAAAGTGATCCTTCCAAGCTGCAGTTC
 AATACTACCAACTGTCGTAGTGATACCGTAATGGAGAAACGGTCATTTAAGGTGCCTCTGGGAAAGGGA
 AGACGCTGTGCTGTTTTAGCAGATGGATTCTATGAGTGGCAGCGATGTCAGGGAACAAACCAGAGGCAG
 CCATACTTCATCTATTTTCTCAAATCAAGACAGAGAAGTCAGGTAGCATTGGTGTGCAGATAGTCCT
 GAGAACTGGGAGAAAGTCTGGGCAACTGGAGGCTGCTGACAATGGCCGGGATCTTTGACTGCTGGGAG
 CCCCCAGAGGGAGGAGATGTCCTGTATTCTATACCATCATCACAGTGGATTCTGCAAAGGCTTGAGT
 GACATCCACCACAGGATGCCTGCCATATTAGATGGAGAGGAGGCAGTTTCTAAATGGCTTGACTTTGGT
 GAAGTCTCAACTCAGGAAGCTCTGAAATTAATCCACCAACAGAGAACATCACCTTCCATGCAGTCTCT
 TCTGTGGTGAACAACCTCGCGAAACAACACTCCTGAGTGTCTGGCTCCTGTGCACTTGGTGGTCAAAAAG
 GAGCTCAGGGCAAGTGGCAGTAGCCAGAGGATGTTGCAGTGGTTGGCCACAAAGTCACCCAAAAAGGAA
 GACTCAAAAACACCTCAAAAGGAAGAGTCAGATGTTCCCAAGTGGTCCAGTCAGTTCCTGCAGAAGAGT
 CCACTCCCACCAAGAGAGGGCACTGCAGGACTCCTAGAGCAATGGCTGAAGCGGGAGAAGGAGGAGGAA
 CCTGTGGCCAAGCGTCTTACAGCCAG**TGA**
ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGAT
 TACAAGGATGACGACGATAAGGTTTAAACGGCCGGC

Restriction Sites:	SgfI-MluI
ACCN:	NM_020187


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Insert Size:	1065 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:	This TrueClone is provided through our Custom Cloning Process that includes sub-cloning into OriGene's pCMV6 vector and full sequencing to provide a non-variant match to the expected reference without frameshifts, and is delivered as lyophilized plasmid DNA.
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_020187.2</u>
RefSeq Size:	1638 bp
RefSeq ORF:	1065 bp
Locus ID:	56941
UniProt ID:	<u>Q96FZ2</u>
Cytogenetics:	3q21.3
Domains:	DUF159
MW:	40.6 kDa

Gene Summary:

Sensor of abasic sites in single-stranded DNA (ssDNA) required to preserve genome integrity by promoting error-free repair of abasic sites (PubMed:30554877). Acts as an enzyme that recognizes and binds abasic sites in ssDNA at replication forks and chemically modifies the lesion by forming a covalent cross-link with DNA (PubMed:30554877). The HMCES DNA-protein cross-link is then degraded by the proteasome (PubMed:30554877). Promotes error-free repair of abasic sites by acting as a 'suicide' enzyme that is degraded, thereby protecting abasic sites from translesion synthesis (TLS) polymerases and endonucleases that are error-prone and would generate mutations and double-strand breaks (PubMed:30554877). Acts as a protease: mediates autocatalytic processing of its N-terminal methionine in order to expose the catalytic cysteine (By similarity). Specifically binds 5-hydroxymethylcytosine (5hmC)-containing DNA in stem cells (By similarity). May act as an endonuclease that specifically cleaves 5hmC-containing DNA; additional experiments are however required to confirm this activity in vivo (By similarity).[UniProtKB/Swiss-Prot Function]

Transcript Variant: This variant (2) differs in the 5' UTR compared to variant 1. Variants 1 and 2 both encode the same isoform (a).