

## Product datasheet for **SC322022**

### **C3orf37 (HMCES) (NM\_001006109) Human Untagged Clone**

#### **Product data:**

|                           |   |
|---------------------------|---|
| Product Type:             | Expression Plasmids                                 |
| Product Name:             | C3orf37 (HMCES) (NM_001006109) Human Untagged Clone |
| Tag:                      | Tag Free  |
| Symbol:                   | C3orf37   |
| Synonyms:                 | C3orf37; DC12; SRAPD1                               |
| Mammalian Cell Selection: | Neomycin  |
| Vector:                   | pCMV6-AC (PS100020)                                 |
| E. coli Selection:        | Ampicillin (100 ug/mL)                              |



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**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.

**RefSeq:** [NM\\_001006109.1](#), [NP\\_001006109.1](#)

**RefSeq Size:** 1809 bp

**RefSeq ORF:** 1065 bp

**Locus ID:** 56941

**UniProt ID:** [Q96FZ2](#)

**Cytogenetics:** 3q21.3

**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 (1) represents the longest transcript. Variants 1 and 2 both encode the same isoform (a).