

## Product datasheet for **SC337940**

### SMC1 (SMC1A) (NM\_001281463) Human Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	SMC1 (SMC1A) (NM_001281463) Human Untagged Clone
Tag:	Tag Free
Symbol:	SMC1A
Synonyms:	CDLS2; DEE85; DXS423E; EIEE85; SB1.8; SMC1; SMC1alpha; SMC1L1; SMCB
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Fully Sequenced ORF:	>NCBI ORF sequence for NM_001281463, the custom clone sequence may differ by one or more nucleotides

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ATGCTTGAGGTGTCGATCCCCACCCACCCTATGTCAGAGGTAAGTCAAATCTCATGGATGCCATCA
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 ACATTGGCAAGGTGGCAAATTACATCAAGGAGCAGTCGACTTGAACCTCCAGGCCATCGTCATCTCTCT  
 CAAGGAGGAGTTCTACACCAAGGCCGAGAGCCTCATTGGAGTCTATCCTGAGCAAGGGGACTGTGTGATC  
 AGCAAAGTCTGACCTTCGACCTACCAAGTACCCAGATGCCAACCCCAACCCCAATGAGCAGTAG

- Restriction Sites:** Sgfl-MluI
- ACCN:** NM\_001281463
- 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).
- 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:**
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\\_001281463.1](#), [NP\\_001268392.1](#)

RefSeq Size:	9930 bp
RefSeq ORF:	3636 bp
Locus ID:	8243
Cytogenetics:	Xp11.22
Protein Families:	Druggable Genome
Protein Pathways:	Cell cycle, Oocyte meiosis
Gene Summary:	<p>Proper cohesion of sister chromatids is a prerequisite for the correct segregation of chromosomes during cell division. The cohesin multiprotein complex is required for sister chromatid cohesion. This complex is composed partly of two structural maintenance of chromosomes (SMC) proteins, SMC3 and either SMC1B or the protein encoded by this gene. Most of the cohesin complexes dissociate from the chromosomes before mitosis, although those complexes at the kinetochore remain. Therefore, the encoded protein is thought to be an important part of functional kinetochores. In addition, this protein interacts with BRCA1 and is phosphorylated by ATM, indicating a potential role for this protein in DNA repair. This gene, which belongs to the SMC gene family, is located in an area of the X-chromosome that escapes X inactivation. Mutations in this gene result in Cornelia de Lange syndrome. Alternative splicing results in multiple transcript variants encoding different isoforms. [provided by RefSeq, Jul 2013]</p> <p>Transcript Variant: This variant (2) differs in the 5' UTR and has multiple coding region differences, compared to variant 1. These differences cause translation initiation at a downstream AUG and result in an isoform (2) with a shorter N-terminus, compared to isoform 1. Sequence Note: The RefSeq transcript and protein were derived from genomic sequence to make the sequence consistent with the reference genome assembly. The genomic coordinates used for the transcript record were based on alignments.</p>