

Product datasheet for **SC116602**

SOS1 (NM_005633) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	SOS1 (NM_005633) Human Untagged Clone
Tag:	Tag Free
Symbol:	SOS1
Synonyms:	GF1; GGF1; GINGF; HGF; NS4; SOS-1
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL4</u>
E. coli Selection:	Ampicillin (100 ug/mL)
Fully Sequenced ORF:	>NCBI ORF sequence for NM_005633, the custom clone sequence may differ by one or more nucleotides

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ATG CAGGCGCAGCAGCTGCCCTACGAGTTTTTCAGCGAAGAGAACGCGCCCAAGTGGCGGGGACTACTGG
TGCTGCGCTGAAAAAGGTCCAGGGGCAAGTTCATCCTACTCTCGAGTCTAATGATGATGCTCTTCAGTA
TGTTGAAGAATTAATTTTGCAATTATTAATATGCTATGCCAAGCTCAGCCCCGAAGTGCTTCAGATGTA
GAGGAACGTGTTCAAAAAAGTTCCCTCATCCAATTGATAAATGGGCAATAGCTGATGCCCAATCAGCTA
TTGAAAAGAGGAAGCGAAGAAACCCCTTATCTCTCCAGTAGAAAAAATTCATCCTTTATTAAGGAGGT
CCTAGTTATAAAATTGACCACCAGTTTCTGTTACATAGTAGCAGTCTTAGAATACATTTCTGCAGAC
ATTTTAAAGCTGGTTGGGAATTATGTAAGAAATATACGGCATTATGAAATTACAAAACAAGATATTAAG
TGGCAATGTGTGCTGACAAGGATTGATGGATATGTTTCATCAAGATGTAGAAGATTAATATATTATC
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GAAATTCGACAATATATAAGGGAACCTAACTAATTATAAAAGTTTTAGAGAGCCCTTTGTCTCCAATT
CAAAATGTTTTTCAGCTAATGATGTAGAAAAATATTTAGTCGCATAGTAGATATACATGAACCTTAGTGT
AAAGTTACTGGCCATATAGAAGATACAGTAGAAATGACAGATGAAGGCAGTCCCATCCACTAGTAGGA
AGCTGCTTTGAAGACTTAGCAGAGGAAGTGGCATTGATCCATATGAATCGATGCTCGAGATATTTGC
GACCTGGTTTTCATGATCGTTTTCTTAGTCAGTTATCAAAGCCTGGGGCAGCACTTATTTGCAGTCAAT
AGGCGAAGTTTTCAAAGAAGCTGTTCAATATGTTTTACCCAGGCTGCTTCTGGCCCTGTTTACCAGTGT
CTCCATTACTTTGAACCTTTTGAAGCAGTTAGAAGAAAAAGTGAAGATCAAGAAGACAAGGAATGTTTAA
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GATGGCAGCATTGATATCTTTACAGTACCGGAGTACACTGGAAAGGATGCTTGATGTAACAATGCTACAG
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AGAATATTATATTTGAAGAGAACATGCAGCCCAAGGCTGGAATCCAATTATCAAAGCAGGAACTGTTAT
TAAACTTATAGAGAGGCTTACGTACCATATGTACGCAGATCCCAATTTTGTTCGGACATTTCTTACAACA
TACAGATCCTTTTGCAAACCTCAAGAACTACTGAGTCTTATAATAGAAAGGTTTGAATTCAGAGCCTG
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TCACTAATATCTTGAAAACAGAAGAAGGCAACCCTGAGGTCCTAAAAAGACATGGAAAAGAGCTTATAAA
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AAAGTACAGCATCTGCACCAAATTTCTCCAAGAACACCGTTAACACCTCCGCCTGCTTCTGGTGCTTCCAG
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ACCATTAAGATTATGTCTAAGCATTGGACAGTCCCCCAGCCATTCTCCTAGGCAACCCACATCAAAA
GCCTATTCACCACGATATTCAATATCAGACCGGACCTCTATCTCAGACCCTCTGAAAGCCCTCCCTTAT
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CCTCAAACACCTTCTCCTCACGGACAAGAAGGCATCTGCCATCACCACCATTGACACAAGAAGTGGACC
TTCATTCCATTGCTGGGCCGCTGTTCCCTCCACGACAAAGCACTTCTCAACATATCCCTAAACTCCCTCC
AAAAACTTACAAAAGGGAGCACACACCCATCCATGCACAGAGATGGACCACCCTGTTGGAGAATGCC
CATTCTTCCTGA

5' Read Nucleotide Sequence:

>OriGene 5' read for NM_005633 unedited
 CTATTTTGTAAATACGACTCACTATAGGGCGGCCGCAATTCGGCACGAGGCCGCCANAG
 GCGCCCCGGGGCACCATGCAGGCGCAGCAGCTGCCCTACGAGTTTTTCAGCGAAGAGAA
 CGCGCCCAAGTGGCGGGGACTACTGGTGCCTGCGCTGAAAAAGTCCAGGGGCAAGTTCA
 TCCTACTCTCGAGTCTAATGATGATGCTCTTCAGTATGTTGAAGAATTAATTTGCAATT
 ATTAAATATGCTATGCCAAGCTCAGCCCCGAAGTGCTTCAGATGTAGAGGAACGTGTTCA
 AAAAGTTTTCCCTCATCCAATTGATAAATGGGCAATAGCTGATGCCCAATCAGCTATTGA
 AAAGAGGAAGCGAAGAAACCCTTTATCTCTCCAGTAGAAAAAATTCATCCTTTATTAAA
 GGAGTCTTAGGTTATAAAATTGACCACCAGGTTTCTGTTTACATAGTAGCAGTCTTAGA
 ATACATTTCTGCAGACATTTTAAAGCTGGTTGGGAATTATGTAAGAAATATACGGCATT
 TGAATTACAAAACAAGATATTAAGTGGCAATGTGTGCTGACAAGGATTGATGGATAT
 GTTTCATCAAGATGTAGAAGATTAATATATTATCTTTAACTGACGAAGAGCCTCCAC
 CTCAGGAGAACAACCTACTATGATTTGGTAAAAGCATTATGGCAGAAATTCGACAATA
 TATAAGGGAACAACTAATTATAAAAGTTTTTAGAGAGCCCTTGTCTCCAATTCAAA
 ATTGTTTTCAGCTAATGATGTAGAAAATATTTAGTCGCATAGTAGATACATGAACT
 TTAGTGTAAGTTACTGNGCCATATAGAGATACAGTNGAAATGACAGATGAAGGCAGTNC
 CATNCACTAGTANGAAGCTGNCTGAAGACTTAGCAGAGGAACTGGCATTGATCCATAT
 GATCGTATGCTCGAAAATTTTGGCAGCTGGTNCATGATCGNTNCCTAGTCAAN

3' Read Nucleotide Sequence:

>OriGene 3' read for NM_005633 unedited
 GGACACTGGGGNNAGGGTACAGGNATGCCACCCGGGCTCTGTTTCAGGAAACAGCTA
 TGACCGCGCCGCAATCTAGAGTCGAGTTTTTTTTTTTTTTTTTAAATTTGTATCTT
 TATTCAATTAATTAACAGACCTGCCAGGTATATTATATAACATTCATATATACATA
 TGATTTAGGCAATGCAAGATAATTCTAGATATGCTGATTACTCAACTATGTGTAACAT
 GAGCGGTGTCAGTATGCCAGCAGGTGCTCCTTTTACATTGGGTGCCTGCATTAGCNT
 GGTGTGGTTAGAGGATAGCTACGAGCCATGACNTGGAAGACNNNACTTCTGTGGGN
 NAANGNGGAAGGTGACGGTCTNGCCTAGGTGACCGGTCTCCGGGGTGCCTTGGGTAG
 GTGGCGGCTGTCTTTCTTTGGCCCTTCTTGCGGCTTCGGGGGGCGGGGTTCCCTT
 TTGGGGGGCGCGCCGGGGGTTTTCTGCTTCCCTTCTGCGCCCTCGGGCTCGGCC
 GGCGCCCCCGCGCCCCGGGGGGGAGGTCCTTCCCGCGGCTCGCCGCGCTGTCCCG
 GGGCGCGCGCGCGGCTTCTCCGGCCGTCCCTTCTCTCTTCCGCGCCCCGAACG
 CGGACCCGGGCGGCTCCCGCGCCGAGACCGGCGTGGGCCGCGGGCAACAGGCTTG
 GCGCGCGCGCTCGCGGGGGGCGTCCGCGTCCCCTACACGGCCGCTCGGGCCGCCCGC
 GCNGCAGGAGCCACCGCGGTGGTGGTCCGCTTCTGTTGGGCCGGGGCGGCGCACCGC
 ACGCTTCCCGCCACACAGACAACCAAGAAAAAAGAAAA

Restriction Sites:

NotI-NotI

ACCN:

NM_005633

Insert Size:

4700 bp

OTI Disclaimer:	<p>Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.</p> <p>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</p>
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_005633.2 , NP_005624.2
RefSeq Size:	4002 bp
RefSeq ORF:	4002 bp
Locus ID:	6654
UniProt ID:	Q07889
Cytogenetics:	2p22.1
Domains:	RhoGEF, RasGEFN, PH, RasGEF
Protein Families:	Druggable Genome
Protein Pathways:	Acute myeloid leukemia, B cell receptor signaling pathway, Chemokine signaling pathway, Chronic myeloid leukemia, Colorectal cancer, Dorso-ventral axis formation, Endometrial cancer, ErbB signaling pathway, Fc epsilon RI signaling pathway, Focal adhesion, Gap junction, Glioma, GnRH signaling pathway, Insulin signaling pathway, Jak-STAT signaling pathway, MAPK signaling pathway, Natural killer cell mediated cytotoxicity, Neurotrophin signaling pathway, Non-small cell lung cancer, Pathways in cancer, Prostate cancer, Regulation of actin cytoskeleton, Renal cell carcinoma, T cell receptor signaling pathway

Gene Summary:

This gene encodes a protein that is a guanine nucleotide exchange factor for RAS proteins, membrane proteins that bind guanine nucleotides and participate in signal transduction pathways. GTP binding activates and GTP hydrolysis inactivates RAS proteins. The product of this gene may regulate RAS proteins by facilitating the exchange of GTP for GDP. Mutations in this gene are associated with gingival fibromatosis 1 and Noonan syndrome type 4. [provided by RefSeq, Jul 2008]