

## Product datasheet for **SC305455**

### **SPIRE2 (NM\_032451) Human Untagged Clone**

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** SPIRE2 (NM\_032451) Human Untagged Clone  
**Tag:** Tag Free  
**Symbol:** SPIRE2  
**Synonyms:** Spir-2  
**Mammalian Cell Selection:** None  
**Vector:** [pCMV6-XL5](#)  
**E. coli Selection:** Ampicillin (100 ug/mL)

**Fully Sequenced ORF:** >OriGene sequence for NM\_032451 edited  
TCCGGCGCGGGAGGCGATGACGGCCCCGCCATGGCCCCGGGCGGGCAGCTGCGGGCGCG  
CCGCGGGCGGGCAGGGCGGCCGAGCCCTGGGAGCTGTCCCTGGAGGAGGTGCTGAAGG  
CCTACGAGCAGCCGCTCAACGAGGAGCAGGCGTGGGCCGTGTGCTTCCAGGGCTGCCGCG  
GGCTGCGGGGCTCGCCGGGCCGGCGCCTGCGGGATACCGGGGACCTCCTGCTGCGCGGGG  
ACGGCTCGGTGCGGGCGCGGGAGCCGAGGCCGCGGAACCTGCAACCATGGTCGTGCCAC  
TAGCCAGCTCGGAAGCCAGACCGTGCAGTCCCTCGGCTTCGCCATCTACCGCGCGCTGG  
ACTGGGGGCTGGACGAGAGCGAGGAGCGCAACTCAGCCCTCAGCTGGAGCGGCTCATCG  
ACCTCATGGCCAACAACGACAGCGAGGACAGCGGCTGCGGTGCCCGCGATGAGGGCTACG  
GGGTCCCAGGAGGAGGAGGAGGCCGAGGGCGTCCCCCGCAGCGTGCACCTTTGCC  
AGGCCATGCGGCTGTGCGCGCGCGGCTGACCGACCCCCGGGGCGCACAGGCGCATTACC  
AGGCCGTGTGCCGCGCTCTTCGTGGAGACGCTGGAGCTGCGGGCCTTCTGGCCAGGG  
TCCGGGAGGCCAAGGAGATGCTGCAGAAGCTTCGGGAGGACGAGCCGATCTGGAGACGC  
CTCGGGCAGAGCTGGACAGCCTGGGTACACAGACTGGGCCGACTGTGGGTTGAGCTCA  
TGCGGGAGCTCCGCCGCGGAGTGAAGCTGAAGAAGGTGCAAGAGCAGGAGTTCAACCCCC  
TCCCCACCGAGTCCAGCTCACGCCCTTCGAGATGCTGATGCAGGACATCCGGGCCCGGA  
ACTACAAGCTGCGCAAGGTCATGGTGGATGGGGACATCCCCCCCCGGGTGAAGAAGGACG  
CTCACGAGCTCATCCTGGACTTTATCCGCTCACGGCTCCACTGAAGCAGGTCTCTGAGA  
GGCGGCTGCGCCGTTGCCACCAAGCAAGGTCCCTGCATGAGAAGATCCTGGAGGAGA  
TCAAGCAGGAGCGGAGGCTGCGCCCCGTTGCGGGGCGAGGCTGGGCTGCCGCGGGTTTG  
GCTCTCTGCCCTGCATCCTCAACGCCTGCTCCGGAGATGCCAAGTCCACCTCCTGCATCA  
ACCTGTGAGTACAGATGCTGGGGCAGCGCCAGCGCCCGGGCCCCGCGTGTGCTCA  
AGGCGCTACCTGGCTGAAATGGAAGAGATGAATACATCTGAGGAAGAAGAGTCTCCGT  
GTGGGGAGGTGACGCTGAAACGGGACCGCTCCTTCTCAGAGCATGACCTGGCCCAGCTCC  
GAAGTGAGGTGGCTCTGGCCTGCAGTCGGCCACCCACCCCCAGGAGGGACGGAGCCAC  
CACGGCCCCGAGCTGGCAGTGCATGTGTGGAGGCCGGCTCCCGAGACCAGGGTACCT  
GTCCCCGAGTGTCTGACCCAGCCACCCCTACTCAGCAACCGGGGCTCCTCGGGG



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ACAGACCCGAGGCTCCATGACCCCGATGCCAACACCTGTGGCTGGAGTTCAGCCACC  
 CCGTGGAGAGCCTGGCGCTGACTGTGGAAGAGGTGATGGACGTGCGCCGTGTGCTGGTGA  
 AGGCCGAGATGGAAAAGTTTTTGCAGAACAGGAGCTCTTCAGCAGTCTGAAGAAGGGGA  
 AGATTTGCTGCTGCTGCCGGCCAAGTTCCTGCTGTTCTCGTGGCCGCCAGCTGTCTCT  
 TCTGCAAGAGAGCCGTCTGCACTTCCTGTAGCATAAAGATGAAGATGCCTTCTAAGAAAT  
 TTGGACACATCCCTGTACACACTGGGCTTTGAGAGTCTCAGAGGGTATCAGTGCCA  
 AAACCCGCCAATCCAGAGAAGAGACATCTTTCAGTCTCTGCAAGGGCCACAGTGGCAGA  
 GCGTGGAGGAGCGTTCCCCACATCTACTCCACGGCTGTGCTGAAGGATGTCTGCA  
 GTGAGTGACCCAGCTTTGTGGCAGAGTGGTGCCTCCAGCCGCAAGAGCGTGGACGTCC  
 TCAACACTACGCCACGACGAGTCGCCAGACCCAAATCCCTCTACATCCCTAACACCAGGA  
 CTCTTGACTTCAAGTGACAGCCCAAGTGGCCAGGCTCCAGGAGGCACCAGGCAGGCC  
 TGTATCAGGCTAGGACGCTCTGAGCTGTGCATGTACATATACATATATAGATACATTT  
 ATAATATACACACAGTCTATATATTTATATACACTGTTTCTGGCCCCAGAGCTCATT  
 TGGGTTACAGGCGCACTTCAAACCCCTCCCTGGGGGAGGCTGTTTCTTCTCAGGATCCTT  
 GCCAGGGAGGAAGGGAGGGAACAGGGTGGGTTTTCTCACTGAAGAGAGAAAGCAGAAGG  
 TTCTAGATCCTGGCACAGACTGCATCCCATGTTCCCATGCTCTTCCCGTCCCCAGGAAT  
 GCGAACCGCAGTTTCCCTTCCCCAGTGGACGTCTAGGTGGGGACAGGGTATCTTGCTCC  
 CAGCTGGACCAGAGTGCCTGCTTGCTCTGCTCTCCCTTTGTGGGGACTCAGGCAGCAG  
 AGGCATCTGGGAAGTCTCTGAGTAGGCAGGGTCTCTGGGAGGCACCCCACTGTTTG  
 AAAGGTCTGGCCAGGCGTGGTGGTTCAGGCCTGTAATTCAGCACTTTGGGAGGCCGAGG  
 AGGGAGGATCACCTGAGGTGAGGAGTTTGGAGCCAGCCTGGCCAAACATGATGAAATGTTG  
 TCTCTACTGAAAAATGCAAAAATTAGCCAGGTATAGTGGCAGGAACCTGTAATCCAGCTA  
 CAGGGGAGGCTGAGGCAGGAGAATCGCTTGAACCCGGGAGGTGTAGGTTGCACTGAGC  
 AGATTGCACCACTGCACTCCAGCCTGGGCGACAGAGCGAGACTCTGTCTGAAAAAAAAA  
 AAGGTCCGTGCCAAGCTGCTCCCTGCCCTTCCCTTTCCCTTCCCTGGGGTCCAAACCA  
 CATGTGTCTGCTCTCCTGGCCCTACCACATTCTGGTGTCTCCTCACTCGCCCCTGGC  
 CCAGAGGCTCCTGAAGATGCTGGCGGTCTGGCACAGGGAGGAGCAGCTCTGTAATCT  
 GTGCACATGGCCACTCTTGGCCTAATAAAGGAGGTCTCACAGTCAAAAAAAAAAAAAA  
 AAAA

**5' Read Nucleotide  
Sequence:**

>OriGene 5' read for NM\_032451 unedited  
 TTGGGCAGTTAGATATTTGTATACCATCATATAGCGGCCGACGAATTCGCACGAGGTCC  
 GGCGCGCGGGAGGCGATGACGGCCCCGCCATGGCCGGGCGGGCAGCTGCGGCGGCGCCG  
 CGGCGGGCGCAGGGCGGCGGAGCCCTGGGAGCTGTCCCTGGAGGAGGTGCTGAAGGCT  
 ACGAGCAGCCGCTCAACGAGGAGCAGGCGTGGGCCGTGTGCTTCCAGGGCTGCCGCGGGC  
 TGCGGGGCTCGCCGGGCGGCGCCTGCGGGATACCGGGACCTCCTGCTGCGCGGGGACG  
 GCTCGGTGCGGGCGGGAGCCGAGGCCGCGGAACCTGCAACCATGGTCTGTCCTAG  
 CCAGCTCGGAAGCCAGACCGTGCAGTCCCTCGGCTTCGCCATCTACCGCGCTGGACT  
 GGGGGCTGGACGAGAGCGAGGAGCGCAACTCAGCCCTCAGTGGAGCGGCTCATCGACC  
 TCATGGCCAACAACGACAGCGAGGACAGCGGTGCGGTGCCGCCGATGAGGGCTACGGNG  
 GTCCCAGGAGGAGGAGGAGGCCGAGGGCGTCCCCCGCAGCGTGCACACCTTTGCCCAGG  
 CCATGCGGCTGTGCGCGGCGGGCTGACCGACCCCGGGGCGCACAGGCGCATTACCAGG  
 CCGTGTGCCGCGCTCTTCTGGAGACGCTGGAGCTGCGGGCCTTCTGGCCAGNGTCC  
 GGGAGGCCAAGGAGATGCTGCAGAACTTCGGGAGAACGAGCCGATCTGGAGACGCCTC  
 GGGCAGAGCTGGACAGCCCTGGTACACAGACTGGGCCGACTGTGGGTTCACTCATGC  
 GGGAGCTCCGCCGCGGAGTGAACCTGAAAAAGTCAAGAACAG

<b>3' Read Nucleotide Sequence:</b>	>OriGene 3' read for NM_032451 unedited NNNCCGCGCATTGGANGATGGCACTTNCAGGNCCAGNAAAGCACTGGGGNAGGGTCACA GGATGCCACCCGGTCTGTTCAGGAAAAGCTATGACCGCGGCCCAATCTAGAGTCGAG TTTTTTTTTTTTTTTTTTTGACTGTGAGACCTCCTTTATTAGGCCAAGAGTGGCCATGT GCACAGATTTACAGAGCTGCTCCTCCCTGTGCCAGGACCGCCAGCATCTTCAGGAGCCT CTGGGCCAGGGGCGAGTGAGGACAGCACCAGAATGTGGTAGGGCCAGGAGAGGCAGGACA CATGTGGTTTGGACCCAGGAAAAGGGAAGGGCAAGGGCAGGGAGCAGCTTGGCACGGA CCTTTTTTTTTTTTCGAGACAGAGTCTCGCTCTGTGCGCCAGGCTGGAGTGCAGTGGTGCA ATCTCGGCTCACTGCAACCTACACCTCCCAGGTTCAAGCGATTCTCCTGCCTCAGCCTCC CCTGTAGCTGGGATTACAGGTTCTGCCACTATACCTGGCTAATTTTTGCATTTTCAGTA GAGACAACATTTTCATCATGTTGGCCAGGCTGGTCTCAAACCTCCTGACCTCAGGTGATCCT CCCTCCTCGGCTCCCAAAGTGTGGAATTACAGGCTGAACCACCACGCCTGGCCAGAC CTTTCAAACAGGTGGGGTGCCTCCCAGGAGGACCCTGCCTACTCAGAGACTTCCCAGAT GCCTCTGCTGCCTGAGTCCCACAAGGGAGAGCAGAAGCAAGCAGGGCACTCTGGTCCAG CTGGGAGCCAAGATACCCTGTCCCACCTAGACGTCCACTGGGAAAAGGAAAAGTCCCGTT CGCATTCTGGGACGGAGAAAACATTGGAACATGGNATGCATTCTGT
<b>Restriction Sites:</b>	Please inquire
<b>ACCN:</b>	NM_032451
<b>Insert Size:</b>	3300 bp
<b>OTI Disclaimer:</b>	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).
<b>OTI Annotation:</b>	The open reading frame of this TrueClone was fully sequenced and found to be a perfect match to the protein associated to this reference.
<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"> <li>1. Centrifuge at 5,000xg for 5min.</li> <li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li> <li>3. Close the tube and incubate for 10 minutes at room temperature.</li> <li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li> <li>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.</li> </ol>
<b>RefSeq:</b>	<a href="#">NM_032451.1</a> , <a href="#">NP_115827.1</a>
<b>RefSeq Size:</b>	3249 bp
<b>RefSeq ORF:</b>	2145 bp
<b>Locus ID:</b>	84501
<b>UniProt ID:</b>	<a href="#">Q8WWL2</a>
<b>Cytogenetics:</b>	16q24.3
<b>Protein Pathways:</b>	Dorso-ventral axis formation

**Gene Summary:**

Acts as an actin nucleation factor, remains associated with the slow-growing pointed end of the new filament (PubMed:21620703). Involved in intracellular vesicle transport along actin fibers, providing a novel link between actin cytoskeleton dynamics and intracellular transport (By similarity). Required for asymmetric spindle positioning and asymmetric cell division during meiosis (PubMed:21620703). Required for normal formation of the cleavage furrow and for polar body extrusion during female germ cell meiosis (PubMed:21620703). Also acts in the nucleus: together with SPIRE1 and SPIRE2, promotes assembly of nuclear actin filaments in response to DNA damage in order to facilitate movement of chromatin and repair factors after DNA damage (PubMed:26287480).[UniProtKB/Swiss-Prot Function]