

## Product datasheet for **MR210260**

### Spire2 (NM\_172287) Mouse Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Spire2 (NM_172287) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Spire2
Synonyms:	BC026502; Spir-2; Spir2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide Sequence:**

>MR210260 ORF sequence  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGGCCCCGGGCGGGCGGGCGGGCGGCAGCAGCTCCCGAACGCGCGGGGGCGCGGGCGGCCGAGCCGT  
 GGGAGCTGTCCCTGGAGGAAGTCTGAAGGTGTACGAGCAGCCATCAACGAGGAGCAGGCCTGGGCGGT  
 GTGCTTCCAGGGCTGCCGCGGGCTGCGGGGCGAGCCGGGCGGCGTGCGGCGCATCCGGGACACGGCAGAC  
 ATCCTCTCGCTAGGGACGGTTCGGTTGGCGCGCGGTGGAGCCCAGCCTACAACCATGGTGGTACCAC  
 CAGCCAGCTCAGAAGCCAGATGGTGCAGTCACTGGGCTTTGCCATTTACCGTGCCTGGACTGGGGTT  
 AGATGAGAACGAGGAGAGAGAGCTCAGCCCGCAGCTGAAAGGCTCATCGACCTCATGGCCAACAGCGAC  
 TGCGAAGACAGCAGCTGCGGGGCGAGCGGATGAGGGCTACGTGGTCCAGAAGAGGAGGAGGAGGCTGAGG  
 GCGGCCCCGAGCTGTGCGCACCTTTGCCAGGCTATGCGGCTGTGTCTTTGCGCTGACCGACCCCA  
 CGGCGCGCAGGCCACTACCAGGCAGTGTGCCAGCTCTTTTGTGGAGACTGGAGCTTCGTGCCTTC  
 CTGGCCCCGGTGGAGGAGCCAAAGAGATGCTGAAGAACTGGGGGAGGAGGCCACGGGAGAAGCCAC  
 TGGCCGAGCTCGACCACCTGGGACACACAGACTGGGCCCGGCTGTGGTCCAGCTCATGCGGGAGCTCCG  
 TCACGGGGTAAAGCTGAAGAAGGTGCAGGAGAAGGAGTTCAACCCACTGCCACCGAGTTCAGCTCACC  
 CCCTTCGAGATGCTGATGCAGGATATCCGTGCCAGGAATAAGCTGCGCAAGGTCATGGTCGATGGGG  
 ACATCCCTCCCAGGGTGAAGAAGGACGCACATGAACCTTACCTGGACTTCATTCTGCTTCGGCTCCACT  
 GAAGCAGGTCTCAGAGAGACAACCTCGCCCTGTACCACAGAAGCAAAGAACAAGTGCACGAGAAGATCCTG  
 GAGGAAATCAAGCAGGAGCGGAGGCTTCGTCCAGTCGGGGCCAGCACTTGGGAGGCCGTGGGTTGGTT  
 CCCTGCCCTGCATCCTCAATGCCTGCTCTGGGGACATCAAGTCCACTTCCTGCATCAACCTGTCTGTAC  
 CGATACTGGGAGCGGGAGTCAGCGCCACGGCCCGGGTCTGCTCAAAGCCCCACCCTTGCAAGATG  
 GAAGAAATGAACACGCTCTGAGGAAGAAGAGTCCCCATGTGGGAGGTGGCACTGAAGCGGGACCGCTCTT  
 TTTGGAACACGACCTGGCCAGCTTCGGAGCGAGATGGCATCTGGCCTTCAGTCAGCCGCTCAGCCCC  
 AGGAGGGACGGAGCCACCTCGGGCCAGAGCAGGTAGCATGCACTCCTGGAGGCCAGCAGCCGAGACCAG  
 GGTTCCTGTCTGTGAGCGGCCAGTCCCAGCCTCTCCCCAGCTCTGCCTTGGCCAGTAGCTTGGAGCTCAG  
 TGGATGGACCTGAGGCGGCTTACCAGATACCAGACACCTGTGGTGGAGTTCAGCCACCCTGTGGAGAG  
 CCTGGCTCTGACTGTGGAAGAGTGGTGGACGTGCGCAGGGTGTGGTGAAGGCGGAGATGGAGAGGTTT  
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 CCCTGTTTTCTGCCCACCCACCTGTCTCTTCTGCAAGAGAGCTGTGTGCACTTCCTGTAGCGTAAAGAT  
 GAAGATGCCTTCAAGAAGTATGGACACATCCCTGTCTACACACTTGGCTTTGAGAGTCTTCAGAGGGTG  
 CCAACTACCAAAGCCACGCCAACACTGAGGAGAGATGCCTTCAAATCCCTGCAGGGACCAAAGTGGCGGA  
 GCGTGGAGGAGGATTCACCCACATCTATGCCACGGCTGTGTCTAAAGGATGTCTGCAGTGAAGTGCAC  
 CAGCTTTGTGGCTGATGTGCTGTCTCCAGCCGAAGAGCGTGGATGTCTCAATGCCACTCCACGACGA  
 AGCCGTACAGCCAGTCCCTCTATATCCCCAACACCAGGACTCTCAACTCCAA

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

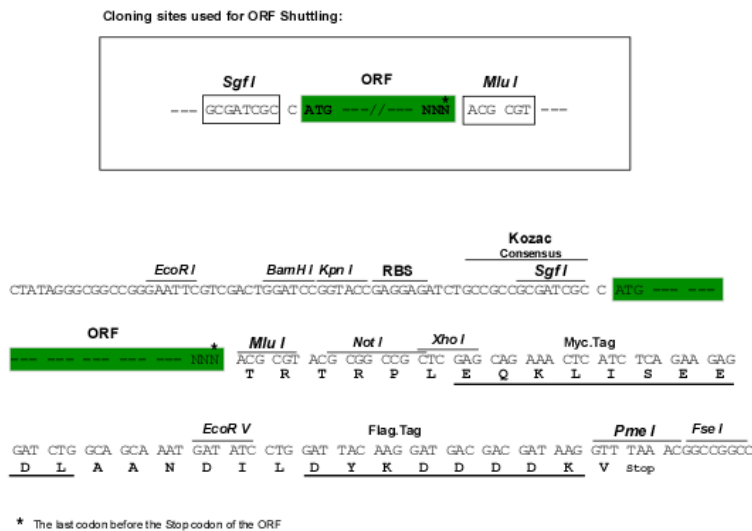
**Protein Sequence:** >MR210260 protein sequence  
Red=Cloning site Green=Tags(s)

MARAGGGGAAAPERAGGAARPEPWELSL EEVLKVYEQPINEEQAWAVCFQGCRGLRGEPPGGVRRIRDAD  
 ILLRRDGSV GARLEPEPTTMVPPASSEAQMVQSLGFAIYRALDWGLDENEERELSPQLERLIDL MANS  
 CEDSSCGAADEGYVGP EEEEEAE GGPRAVRTFAQAMRLCALRLTDPHGAQAHYQAVCRALFVETLELRAF  
 LARVREAKEMLKKL GEEEPREKPLAELDHLGHTDWARLWVQLMREL RHGVKLLKKVQEKFNPLPTEFQLT  
 PFEMLMQDIRARNYKLRKVMVDGDI PPRVKKDAHELILDFIRSRPPLKQVSERQLRPVPQKQRTLHEKIL  
 EEIKQERRLRPVGAQHLGGRGF GSLPCILNACSGDIKSTSCINLSVTDTGSGSQRPRVLLKAPTLAEM  
 EEMNTSEEEESP CGEVALKRDRSFSEHDLAQLRSEMASGLQSAAPPGGTEPPRARAGSMHSWRPSSRDQ  
 GFPCVSGSQPLPSSALPSSLSSVDGPEAASPDTRHLWLEF SHPVE SLALTV EEVVDVRRVLVKAEMERF  
 LQDKELFSSLRGKICCCRAKFLF SWPPTCLFCKRAVCTSCSVKMKMPSKKGHIPPVYTLGFESLQRV  
 PTTKATPTLRDAFQSLQGPKWRSVEEEFPHIYAHGCVLKDVCSDCTSFVADVVCSSRKSVDV LNATPRR  
 SRQTQSLYIPNTRTLNFQ

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_172287

**ORF Size:** 2157 bp

**OTI Disclaimer:** 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](#)

**OTI Annotation:** This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

**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\\_172287.2](#), [NP\\_758491.1](#)

**RefSeq Size:** 2399 bp

**RefSeq ORF:** 2157 bp

**Locus ID:** 234857

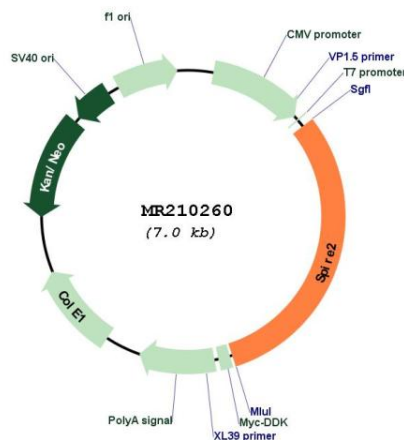
**UniProt ID:** [Q8K1S6](#)

**Cytogenetics:** 8 E1

**MW:** 80.2 kDa

**Gene Summary:** Acts as an actin nucleation factor, remains associated with the slow-growing pointed end of the new filament (PubMed:21620703, PubMed:21983562). Involved in intracellular vesicle transport along actin fibers, providing a novel link between actin cytoskeleton dynamics and intracellular transport (PubMed:21983562). Required for asymmetric spindle positioning and asymmetric cell division during oocyte 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 (By similarity). [UniProtKB/Swiss-Prot Function]

## Product images:



Circular map for MR210260