

## Product datasheet for **MC222266**

### Piwil1 (NM\_021311) Mouse Untagged Clone

#### Product data:

|                           |   |
|---------------------------|---|
| Product Type:             | Expression Plasmids                     |
| Product Name:             | Piwil1 (NM_021311) Mouse Untagged Clone |
| Tag:                      | Tag Free                                |
| Symbol:                   | Piwil1                                  |
| Synonyms:                 | MIWI                                    |
| Mammalian Cell Selection: | Neomycin                                |
| Vector:                   | pCMV6-Entry (PS100001)                  |
| E. coli Selection:        | Kanamycin (25 ug/mL)                    |



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Fully Sequenced ORF: >MC222266 representing NM\_021311  
 Red=Cloning site Blue=ORF

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGACTGGCCGAGCCGAGCTCGGGCCCGCGCAGGGCAGAGGTCAGGAGACGGTGCAGCATGTTGGGG  
 CTGCTGCGAGCCAGCAACCTGGGTACATCCCACGAGACCTCAACAGTCCCCACAGAGGGGACTTGGT  
 TGGCCGAGGACGACAGAGGGGATGGTAGTCGGAGCCACATCCAAGTCACAAGAAGTGCAGATCTCAGT  
 GGGTTTCAGGAGCTGTCCTGGCAGAGAGAGGAGGGCGTCGCGGAGACTTCCATGACCTTGGTGTGAACA  
 CCAGACAGAACCTTGACCATGTCAAAGAGTCAAAGACAGGCTCCTCTGGCATCATTGTGAAGCTGAGCAC  
 CAACCACTTCCGGCTGACCTCGCGCCACAGTGGGCCCTGTATCAGTACCACATCGACTACAATCCCCTG  
 ATGGAGGCCCGAAGGCTTCGCTCCGCACTGCTCTCCAGCATGAAGACCTCATTGGAAGGTGCATGCTT  
 TCGATGGGACAATATTGTTTTACCTAAGAGACTACAGCACAAGGTCACAGAAGTATTAGTCAGACTCG  
 GAATGGGGAACAGTGAGGATCACCATCACCTGACCAACGAGCTGCCGCCACCTCGCCACCTGCCTG  
 CAGTTCTATAACATCATCTTCAGGAGGCTCTTGAAAATCATGAATTTGCAACAAATTGGACGGAATTATT  
 ACAATCCAAGTGACCCGATTGATATTCCAACACAGGTTGGTGTACTGGCCCGGCTTACCACCTCCAT  
 CCTTCAGTATGAGAAACATCATGCTCTGCACAGACGTCAGCCACAAGGTGCTCCGACGAGACTGTC  
 CTAGACTTCATGTTCAATCTATACCAGCAGACAGAGGAGCACAAGTTCAGGAGCAAGTGTGCAAGGAGC  
 TCATAGGCCTCATCGTTCTACCAAGTACAATAACAAGACCTACCGGGTGGATGACATTGACTGGGACCA  
 GAATCAAAGAGCACCTCAAGAAGCGGATGGCTCGGAGGTGAGTTCCTGGAGTACTACAGGAAGCAA  
 TACAACAGGAGATCACGGACCTGAAGCAGCCGGTGTGGTGAAGCAACCAAGCGGAGGAGAGGCCCGG  
 GCGGCACTGCCTGGCCAGCTATGCTCATCCCTGAACCTGCTATCTCACAGGCTGACTGATAAAAT  
 GCGCAATGATTTCAATGTGATGAAGGACCTGGCAGTGCACACGCGGCTGACCCCTGAGCAGCGGCAGCGG  
 GAGGTGGGCCGCTCATCGACTACATCCACAAGGATGACAATGTGCAGAGAGAGCTTCGAGACTGGGGCC  
 TGAGTTCGACTCAAACCTGCTGTCTTCTCTGGAAGAATCTTACAATCTGAGAAGATCCACCAGGGCGG  
 AAAGACGTTTGATTACAACCCACAATTTGCAGACTGGTCCAAAGAAACAAGAGGCGCGCCGCTGATCAGC  
 GTGAAGCCATTGGATAACTGGCTGCTGATCTATACCCGAGGAATTATGAAGCAGCAACTCACTGATAC  
 AGAACCTGTTCAAAGTACTCCAGCCATGGGCATCCAGATGAAAAAGGCAATCATGATCGAGGTGGATGA  
 CAGAACAGAAGCTTATCTGAGAGCCTTGACGAGAAAGGTGACGTCAGACACTCAGATAGTTGTCTGTCTC  
 TTGTCAAGTAATCGGAAGGACAAATATGATGCCATCAAGAAGTACTTGTGTACAGACTGCCCCACCCAA  
 GTCAGTGTGGTGGCCCGGACCCTGGCAAGCAGCAAACAGTCATGGCCATTGCCACCAAGATCGCCCT  
 GCAGATGAACTGCAAGATGGGAGGCGAGCTCTGGCGGGTGGACATGCCCTGAAACTGGCAATGATCGTG  
 GGCATCGACTGTTACCATGACACCACAGCTGGGCGGAGGTCCATCGCAGGATTTCGTGCCAGCATCAATG  
 AAGGGATGACCCGCTGGTTCTCCCGCTGCGCTTTTCAGGACCGCGGGCAGGAGCTGGTGGATGGTCTCAA  
 GGTGTGCTTCAAGCTGCTCTGAGGGCTTGAGTGGTGAATGAATACATGCCAGCCGTGTCATCGTG  
 TACCGAGACGGTGTGGGGACGGGCAGCTGAAGACCCTGGTCAATTATGAGGTCCACAGTTCCTAGATT  
 GCCTCAAGTCAGTCGGGAGAGGTTACAACCAAGACTGACTGTAATCGTGGTGAAGAAGCGTGTCAATGC  
 CAGGTTTTTGTCTCAGTCTGGGGAAAGACTTCAGAACCCTCTCCAGGGACAGTCATCGATGTGGAAGTC  
 ACCAGACCAGAGTGGTATGACTTTTTTCATCGTGAGCCAGGCAAGTGAAGAAGCGGGAGTGTGTCCCAACAC  
 ACTACAATGTCATCTATGACAGCAGTGGCCTGAAGCCCGACCACATCCAGCGGCTGACATACAAGCTCTG  
 CCACGTGTAATAATTGGCCTGGAGTCAATCCAGTCCCTGCACCTTGCCAGTATGCACACAAGCTGGCC  
 TTCCTCGTGGCCAGAGCATCCACAGAGAGCCAAACCTCTCCCTGTCCAACCGCTCTACTACCTCTAA

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

Restriction Sites: SgfI-MluI  
 ACCN: NM\_021311  
 Insert Size: 2589 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>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="#">BC129857</a> , <a href="#">AAI29858</a>   |
| <b>RefSeq Size:</b>           | 2909 bp   |
| <b>RefSeq ORF:</b>            | 2589 bp   |
| <b>Locus ID:</b>              | 57749   |
| <b>UniProt ID:</b>            | <a href="#">Q9JMB7</a>  |
| <b>Cytogenetics:</b>          | 5 67.86 cM  |
| <b>Gene Summary:</b>          | Endoribonuclease that plays a central role in postnatal germ cells by repressing transposable elements and preventing their mobilization, which is essential for the germline integrity (PubMed:11578866, PubMed:22121019, PubMed:21237665). Acts via the piRNA metabolic process, which mediates the repression of transposable elements during meiosis by forming complexes composed of piRNAs and Piwi proteins and governs the methylation and subsequent repression of transposons (PubMed:11578866, PubMed:22121019, PubMed:21237665). Directly binds methylated piRNAs, a class of 24 to 30 nucleotide RNAs that are generated by a Dicer-independent mechanism and are primarily derived from transposons and other repeated sequence elements (PubMed:11578866, PubMed:22121019, PubMed:21237665). Strongly prefers a uridine in the first position of their guide (g1U preference, also named 1U-bias) (PubMed:24757166). Not involved in the piRNA amplification loop, also named ping-pong amplification cycle (PubMed:22121019). Acts as an endoribonuclease that cleaves transposon messenger RNAs (PubMed:22121019). Besides their function in transposable elements repression, piRNAs are probably involved in other processes during meiosis such as translation regulation (PubMed:16938833). Probable component of some RISC complex, which mediates RNA cleavage and translational silencing (PubMed:16938833). Also plays a role in the formation of chromatoid bodies and is required for some miRNAs stability (PubMed:16787948). Required to sequester RNF8 in the cytoplasm until late spermatogenesis; RNF8 being released upon ubiquitination and degradation of PIWIL1 (PubMed:28552346).[UniProtKB/Swiss-Prot Function] |