

Product datasheet for **SR420948**

Piwil4 Mouse siRNA Oligo Duplex (Locus ID 330890)

Product data:

Product Type:	siRNA Oligo Duplexes
Purity:	HPLC purified
Quality Control:	Tested by ESI-MS
Sequences:	Available with shipment
Stability:	One year from date of shipment when stored at -20°C.
# of transfections:	Approximately 330 transfections/2nmol in 24-well plate under optimized conditions (final conc. 10 nM).
Note:	Single siRNA duplex (10nmol) can be ordered.
RefSeq:	NM_177905 , NM_001368831 , NM_001368832 , NM_001368836
UniProt ID:	Q8CGT6
Synonyms:	9230101H05Rik; Miwi2
Components:	Piwil4 (Mouse) - 3 unique 27mer siRNA duplexes - 2 nmol each (Locus ID 330890) Included - SR30004, Trilencer-27 Universal Scrambled Negative Control siRNA Duplex - 2 nmol Included - SR30005, RNase free siRNA Duplex Resuspension Buffer - 2 ml



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Summary:

Plays a central role during spermatogenesis by repressing transposable elements and preventing their mobilization, which is essential for the germline integrity (PubMed:17395546, PubMed:18381894, PubMed:18922463, PubMed:26669262, PubMed:22020280). 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:17395546, PubMed:18381894, PubMed:18922463, PubMed:26669262, PubMed:22020280). Directly binds 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. Associates with secondary piRNAs antisense and PIWIL2/MILI is required for such association (PubMed:17395546, PubMed:18381894, PubMed:18922463, PubMed:26669262, PubMed:22020280). The piRNA process acts upstream of known mediators of DNA methylation (PubMed:17395546, PubMed:18381894, PubMed:18922463, PubMed:26669262, PubMed:22020280). Does not show endonuclease activity (PubMed:22020280). Plays a key role in the piRNA amplification loop, also named ping-pong amplification cycle, by acting as a 'slicer-incompetent' component that loads cleaved piRNAs from the 'slicer-competent' component PIWIL2 and target them on genomic transposon loci in the nucleus (PubMed:22020280). In addition to its role in germline, PIWIL4 also plays a role in the regulation of somatic cells activities. Plays a role in pancreatic beta cell function and insulin secretion (By similarity). Involved in maintaining cell morphology and functional integrity of retinal epithelial through Akt/GSK3alpha/beta signaling pathway (By similarity). [UniProtKB/Swiss-Prot Function]

Performance Guaranteed:

OriGene guarantees that at least two of the three Dicer-Substrate duplexes in the kit will provide at least 70% or more knockdown of the target mRNA when used at 10 nM concentration by quantitative RT-PCR when the TYE-563 fluorescent transfection control duplex (cat# SR30002) indicates that >90% of the cells have been transfected and the HPRT positive control (cat# SR30003) provides 90% knockdown efficiency.

For non-conforming siRNA, requests for replacement product must be made within ninety (90) days from the date of delivery of the siRNA kit. To arrange for a free replacement with newly designed duplexes, please contact Technical Services at techsupport@origene.com. Please provide your data indicating the transfection efficiency and measurement of gene expression knockdown compared to the scrambled siRNA control (quantitative RT-PCR data required).