



## Mouse PIWIL2 peptide (DAG-P1056)

This product is for research use only and is not intended for diagnostic use.

### PRODUCT INFORMATION

#### Antigen Description

Plays a central role during spermatogenesis by repressing transposable elements and prevent their mobilization, which is essential for the germline integrity. Plays an essential role in meiotic differentiation of spermatocytes, germ cell differentiation and in self-renewal of spermatogonial stem cells. Its presence in oocytes suggests that it may participate to similar functions during oogenesis in females. 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 govern the methylation and subsequent repression of transposons. 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 primary piRNAs in the cytoplasm and is required for PIWIL4/MIWI2 nuclear localization and association with secondary piRNAs antisense. The piRNA process acts upstream of known mediators of DNA methylation. Participates to a piRNA amplification loop. Besides their function in transposable elements repression, piRNAs are probably involved in other processes during meiosis such as translation regulation. Indirectly modulate expression of genes such as PDGFRB, SLC2A1, ITGA6, GJA7, THY1, CD9 and STRA8. Inhibits tumor cell growth when repressed. When overexpressed, acts as an oncogene by inhibition of apoptosis and promotion of proliferation in tumors.

<b>Specificity</b>	Expressed in adult testis and in most tumors.
<b>Conjugate</b>	Unconjugated
<b>Sequence Similarities</b>	Belongs to the argonaute family. Piwi subfamily. Contains 1 PAZ domain. Contains 1 Piwi domain.
<b>Format</b>	Liquid
<b>Preservative</b>	None
<b>Storage</b>	Shipped at 4°C. Upon delivery aliquot and store at -20°C or -80°C. Avoid repeated freeze / thaw cycles. Information available upon request.

# GENE INFORMATION

Gene Name	<a href="#">Pwll2 piwi-like RNA-mediated gene silencing 2 [ Mus musculus (house mouse) ]</a>
Official Symbol	PIWIL2
Synonyms	PIWIL2; piwi-like RNA-mediated gene silencing 2; mili; Piwil1l; piwi-like protein 2; Miwi like; Miwi likw; piwi like homolog 2; piwi-like homolog 2;
Entrez Gene ID	<a href="#">57746</a>
mRNA Refseq	<a href="#">NM_021308.1</a>
Protein Refseq	<a href="#">NP_067283.1</a>
UniProt ID	Q8CDG1
Chromosome Location	14 D2; 14
Pathway	Dorso-ventral axis formation, organism-specific biosystem; Dorso-ventral axis formation, conserved biosystem;
Function	RNA binding; mRNA binding; nucleic acid binding; piRNA binding; piRNA binding; protein binding;