abcam

Product datasheet

Mouse PIWIL4/PIWI peptide ab23535

1 Image

Description

Product name	Mouse PIWIL4/PIWI peptide
Purity	> 90 % HPLC.
Accession	Q8CGT6
Animal free	No
Nature	Synthetic
Species	Mouse
Predicted molecular weight	95 kDa

Specifications

Our **Abpromise guarantee** covers the use of **ab23535** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Applications	Blocking - Blocking peptide for Anti-PIWIL4/PIWI antibody (**ab21869**)
Form	Liquid
Additional notes	*- First try to dissolve a small amount of peptide in either water or buffer. The more charged residues on a peptide, the more soluble it is in aqueous solutions.* *- If the peptide doesn't dissolve try an organic solvent e.g. DMSO, then dilute using water or buffer.* *- Consider that any solvent used must be compatible with your assay. If a peptide does not dissolve and you need to recover it, lyophilise to remove the solvent.* *- Gentle warming and sonication can effectively aid peptide solubilisation. If the solution is cloudy or has gelled the peptide may be in suspension rather than solubilised.* *- Peptides containing cysteine are easily oxidised, so should be prepared in solution just prior to use.* This product was previously labelled as PIWIL4

Preparation and Storage

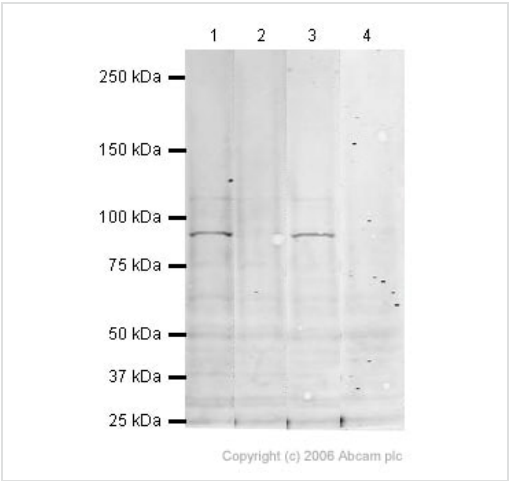
Stability and Storage	Shipped at 4°C. Upon delivery aliquot and store at -20°C or -80°C. Avoid repeated freeze / thaw cycles.

Information available upon request.

General Info

Function	Plays a central role during spermatogenesis by repressing transposable elements and prevent their mobilization, which is essential for the germline integrity. 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 secondary piRNAs antisense and PIWIL2/MILI is required for such association. 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 (By similarity). May be involved in the chromatin-modifying pathway by inducing 'Lys-9' methylation of histone H3 at some loci.
Tissue specificity	Expressed in testis. According to PubMed:17544373, it is ubiquitously expressed.
Sequence similarities	Belongs to the argonaute family. Piwi subfamily. Contains 1 PAZ domain. Contains 1 Piwi domain.
Post-translational modifications	Arginine methylation by PRMT5 is required for the interaction with Tudor domain-containing protein (TDRD1, TDRKH/TDRD2 and TDRD9) and subsequent localization to the meiotic nuage, also named P granule.
Cellular localization	Nucleus. Cytoplasm. Probable component of the meiotic nuage, also named P granule, a germ-cell-specific organelle required to repress transposon during meiosis. PIWIL2/MILI is required for nuclear localization.

Images



Western blot - Mouse PIWIL4/PIWI peptide (ab23535)

ab21869 specifically recognises PIWIL4 at 98kDa, which is demonstrated by the efficient blocking by the immunizing peptide **(ab23535)**.

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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