## abcam

## Product datasheet

## Anti-PIWIL4/PIWI antibody abl 11714

## 10 References 3 Images

## Overview

| Product name | Anti-PIWIL4/PIWI antibody |
| :--- | :--- |
| Description | Rabbit polyclonal to PIWIL4/PIWI |
| Host species | Rabbit |
| Tested applications | Suitable for: WB, IHC-P, ICC/IF |
| Species reactivity | Reacts with: Human |
|  | Predicted to work with: Monkey |

Immunogen
Recombinant fragment corresponding to Human PIWIL4/PIWI aa 639-839. (AAH31060)
Positive control
General notes

## Properties

| Form | Liquid |
| :--- | :--- |
| Storage instructions | Shipped at $4^{\circ} \mathrm{C}$. Upon delivery aliquot and store at $-20^{\circ} \mathrm{C}$ or $-80^{\circ} \mathrm{C}$. Avoid repeated freeze / thaw |
| cycles. |  |
| Storage buffer | $\mathrm{pH}: 7.00$ |
|  | Preservative: $0.025 \%$ Proclin 300 |
|  | Constituents: $79 \%$ PBS, $20 \%$ Glycerol (glycerin, glycerine) |
| Purity | Immunogen affinity purified |
| Purification notes | ab111714 is purified by antigen-affinity chromatography. |
| Clonality | Polyclonal |
| Isotype | lgG |

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## The Abpromise guarantee

Our Abpromise guarantee covers the use of ab111714 in the following tested applications.
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

| Application | Abreviews | Notes |
| :--- | :--- | :--- |
| WB |  | $1 / 500-1 / 3000$. Predicted molecular weight: 97 kDa. |
| IHC-P |  | $1 / 100-1 / 500$. Perform heat mediated antigen retrieval with <br> citrate buffer pH 6 before commencing with IHC staining protocol. <br> or Tris-EDTA buffer (PH8.0) |
| ICC/IF |  | $1 / 100-1 / 500$. |

## Target

| 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 H 3 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. <br> Contains 1 PAZ domain. <br> 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



Immunocytochemistry/ Immunofluorescence - AntiPIWIL4/PIWI antibody (ab111714)

Anti-PIWIL4/PIWI antibody (ab111714) at 1/1000 dilution + MCF7
whole cell lysate at $30 \mu \mathrm{~g}$

## Predicted band size: 97 kDa

## 7.5\% SDS-PAGE.

## ab111714 at 1/200 dilution staining PIWIL4/PIWI in

Paraformaldehyde-fixed MCF7 cells by Immunofluorescence. Lower image shows cells co-stained with Hoechst 33342.

ab111714 at 1/500 dilution staining PIWIL4/PIWI in Formalin-fixed,

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[^0]:    Anulinatinne

