

**PIWI / HIWI Antibody (internal region)**  
**Peptide-affinity purified goat antibody**  
**Catalog # AF2435a****Specification**

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**PIWI / HIWI Antibody (internal region) - Product Information**

Application	IHC
Primary Accession	<a href="#">Q96J94</a>
Other Accession	<a href="#">NP_004755.2</a> , <a href="#">NP_001177900.1</a> , <a href="#">9271</a> , <a href="#">57749</a> (mouse)
Reactivity	Human
Predicted	Mouse, Rat, Pig, Dog
Host	Goat
Clonality	Polyclonal
Concentration	0.5 mg/ml
Isotype	IgG
Calculated MW	98603

**PIWI / HIWI Antibody (internal region) - Additional Information****Gene ID** 9271**Other Names**

Piwi-like protein 1, PIWIL1, HIWI

**Format**

0.5 mg/ml in Tris saline, 0.02% sodium azide, pH7.3 with 0.5% bovine serum albumin

**Storage**

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions**

PIWI / HIWI Antibody (internal region) is for research use only and not for use in diagnostic or therapeutic procedures.

**PIWI / HIWI Antibody (internal region) - Protein Information****Name** PIWIL1**Function**

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. 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. 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. Strongly prefers a uridine in the first position of their guide (g1U preference, also named 1U-bias). Not involved in the piRNA amplification loop, also named ping-pong amplification cycle. Acts as an endoribonuclease that cleaves transposon messenger RNAs. Besides their function in transposable elements repression, piRNAs are probably involved in other processes during meiosis such as translation regulation. Probable component of some RISC complex, which mediates RNA cleavage and translational silencing. Also plays a role in the formation of chromatoid bodies and is required for some miRNAs stability. Required to sequester RNF8 in the cytoplasm until late spermatogenesis; RNF8 being released upon ubiquitination and degradation of PIWIL1.

#### **Cellular Location**

Cytoplasm {ECO:0000250|UniProtKB:Q9JMB7}. Note=Component of the meiotic nuage, also named P granule, a germ-cell- specific organelle required to repress transposon activity during meiosis. Also present in chromatoid body {ECO:0000250|UniProtKB:Q9JMB7}

#### **Tissue Location**

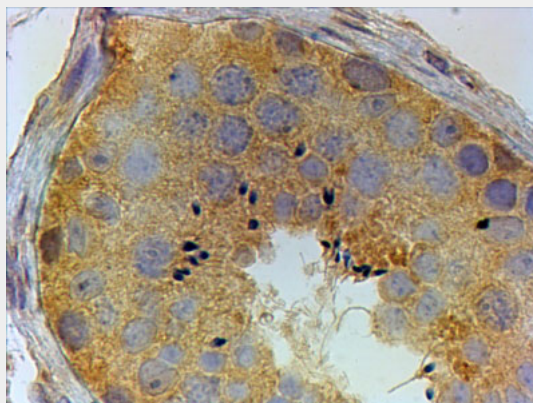
Expressed in spermatocytes and spermatids. Also detected in prostate cancer (at protein level). Detected in most fetal and adult tissues. Expressed in testes, specifically in germline cells; detected in spermatocytes and spermatids during spermatogenesis Increased expression in testicular tumors originating from embryonic germ cells with retention of germ cells phenotype. No expression in testicular tumors of somatic origin, such as Sertoli cell and Leydig cell tumors. Overexpressed in gastric cancer cells. Isoform 3: Ubiquitously expressed, and specifically in CD34(+) hematopoietic progenitor cells but not in more differentiated cells

#### **PIWI / HIWI Antibody (internal region) - Protocols**

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

#### **PIWI / HIWI Antibody (internal region) - Images**



AF2435a (4 µg/ml) staining of paraffin embedded Human Testis. Steamed antigen retrieval with citrate buffer pH 6, HRP-staining.

**PIWI / HIWI Antibody (internal region) - Background**

This antibody is expected to recognise both reported isoforms (NP\_004755.2; NP\_001177900.1).

**PIWI / HIWI Antibody (internal region) - References**

Regulatory Relationship among piwi, pumilio, and bag-of-marbles in Drosophila Germline Stem Cell Self-Renewal and Differentiation. Szakmary A, Cox DN, Wang Z, Lin H. Curr Biol. 2005 Jan 26;15(2):171-8. PMID: 15668175