

**KD-Validated Anti-PIWIL1 Rabbit Monoclonal Antibody**  
**Rabbit monoclonal antibody**  
**Catalog # AGI1690****Specification****KD-Validated Anti-PIWIL1 Rabbit Monoclonal Antibody - Product Information**

|                   |   |
|-------------------|---|
| Application       | WB, FC  |
| Primary Accession | <a href="#">Q96J94</a>  |
| Reactivity        | Rat, Human, Mouse   |
| Clonality         | Monoclonal  |
| Isotype           | Rabbit IgG  |
| Calculated MW     | Predicted, 99 kDa , observed, 99 kDa KDa  |
| Gene Name         | PIWIL1  |
| Aliases           | Piwi Like RNA-Mediated Gene Silencing 1;<br>HIWI; CT80.1; PIWI; Piwi-Like Protein 1;<br>Piwi (Drosophila)-Like 1; Piwi-Like 1<br>(Drosophila); Piwi Homolog; EC 3.1.26.-;<br>MIWI |
| Immunogen         | A synthesized peptide derived from human<br>PIWIL1  |

**KD-Validated Anti-PIWIL1 Rabbit Monoclonal Antibody - Additional Information**

|                                       |      |
|---------------------------------------|------|
| Gene ID                               | 9271 |
| <b>Other Names</b>                    |      |
| Piwi-like protein 1, 3.1.26.-, PIWIL1 |      |

**KD-Validated Anti-PIWIL1 Rabbit Monoclonal Antibody - 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}

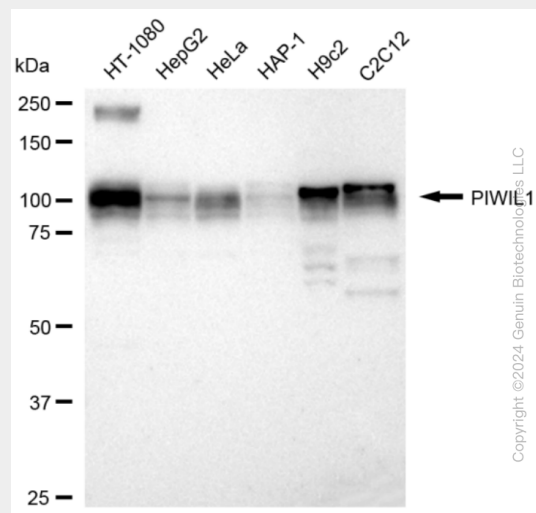
**Tissue Location**

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

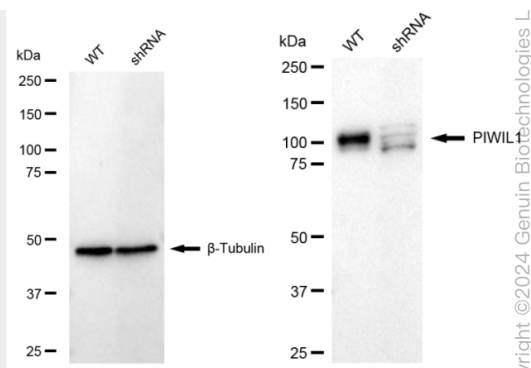
**KD-Validated Anti-PIWIL1 Rabbit Monoclonal Antibody - Protocols**

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

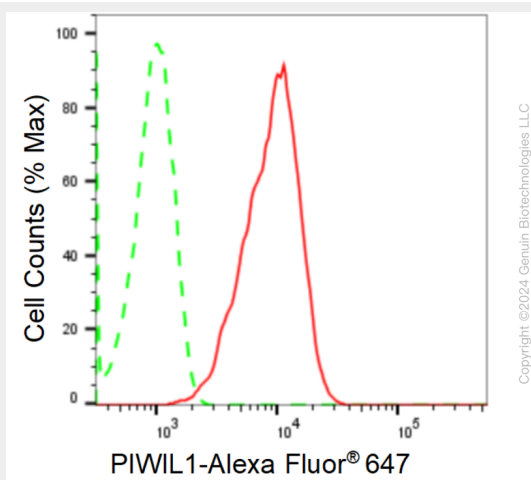
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

**KD-Validated Anti-PIWIL1 Rabbit Monoclonal Antibody - Images**

Western blotting analysis using anti-PIWIL1 antibody (Cat#AGI1690). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with anti-PIWIL1 antibody (Cat#AGI1690, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Western blotting analysis using anti-PIWIL1 antibody (Cat#AGI1690). PIWIL1 expression in wild type (WT) and PIWIL1 shRNA knockdown (KD) HeLa cells with 20  $\mu$ g of total cell lysates.  $\beta$ -Tubulin serves as a loading control. The blot was incubated with anti-PIWIL1 antibody (Cat#AGI1690, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Flow cytometric analysis of PIWIL1 expression in HT-1080 cells using anti-PIWIL1 antibody (Cat#AGI1690, 1:2,000). Green, isotype control; red, PIWIL1.