

PIWIL1 Rabbit pAb

CatalogNo: YN6298

Key Features

Host Species

- Rabbit

Reactivity

- Human, Mouse

Applications

- WB

MW

- 95kD (Calculated)

Isotype

- IgG

Recommended Dilution Ratios

WB 1:500-2000

Storage

Storage* -15°C to -25°C/1 year(Do not lower than -25°C)

Formulation Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.

Basic Information

Clonality Polyclonal

Immunogen Information

Immunogen Synthesized peptide derived from human PIWIL1

Specificity This antibody detects endogenous levels of PIWIL1 at Human, Mouse

Target Information

Gene name PIWIL1 HIWI

Protein Name

Piwi-like protein 1

Organism**Gene ID****UniProt ID**

Human

[9271](#);[Q96J94](#);

Mouse

[57749](#);[Q9JMB7](#);**Cellular
Localization**

Cytoplasm . 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. .

Tissue specificity

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.

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. ; [Isoform 3]: May be a negative developmental regulator .

| Validation Data

| Contact information

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