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Rabbit Anti-PIWIL1 antibody

SL0665R

Product Name	PIWIL1
Chinese Name	piwi 样 1 蛋白抗体
Alias	HIWI; MIWI; P-element induced wimpy testis; Piwi; Piwi homolog; Piwi like 1; Piwi like protein 1; PIWIL 1; PIWIL1; HIWI; MIWI; Piwi (Drosophila) like 1; PIWI; Piwi homolog; Piwi like 1 (drosophila); Piwi like 1; Piwi-like protein 1; PIWIL 1; PIWIL1; PIWL1; piwi-like protein 1 isoform 1; PIWL1_HUMAN.
Research Area	Tumour Chromatin and nuclear signals Signal transduction Stem cells transcriptional regulatory factor
Immunogen Species	Rabbit
Clonality	Polyclonal
React Species	Human, (predicted: Mouse, Rat, Chicken,)
Applications	IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500 （Paraffin sections need antigen repair） not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Theoretical molecular weight	95kDa
Cellular localization	The nucleus
Form	Liquid
Concentration	1mg/ml
immunogen	KLH conjugated synthetic peptide derived from human PIWIL1: 551-650/861
Lsotype	IgG
Purification	affinity purified by Protein A
Buffer Solution	1M TBS(pH7.4) with 1% BSA, 3% Proclin300 and 50% Glycerol.
Storage	Shipped at 4℃. Store at -20 °C for one year. Avoid repeated freeze/thaw cycles.
Attention	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

PubMed

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This gene encodes a member of the PIWI subfamily of Argonaute proteins, evolutionarily conserved proteins containing both PAZ and Piwi motifs that play important roles in stem cell self-renewal, RNA silencing, and translational regulation in diverse organisms. The encoded protein may play a role as an intrinsic regulator of the self-renewal capacity of germline and hematopoietic stem cells. Alternatively spliced transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Jul 2010].

Product Detail

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 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. 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. Isoform 3 may be a negative developmental regulator.

Subunit:
Interacts (via Piwi domain) with DICER1, suggesting that it forms ribonucleoprotein RISC complexes. This interaction is regulated by HSP90AB1 activity. Interacts with MAEL, KIF17, PABPC1, PRMT5 and WDR77. Interacts (when methylated on arginine residues) with TDRD1, TDRKH/TDRD2, RNF17/TDRD4, TDRD6, TDRD7 and TDRD9.

Subcellular Location:
Cytoplasm. Note=Component of the meiotic nuage, also named P granule, a germ-cell-specific organelle required to repress transposon during meiosis. Also present in chromatoid body.

Tissue Specificity:
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 is ubiquitously expressed, and specifically in CD34+ hematopoietic progenitor cells but not in more differentiated cells.

Post-translational modifications:
Arginine methylation by PRMT5 is required for the interaction with Tudor domain-containing protein (TDRD1, TDRKH/TDRD2, RNF17/TDRD4, TDRD6, TDRD7 and TDRD9) and subsequent localization to the meiotic nuage, also named P granule.

Similarity:
Belongs to the argonaute family. Piwi subfamily.
Contains 1 PAZ domain.
Contains 1 Piwi domain.

SWISS:
A6N7Y9

Gene ID:
9271

Database links:

Entrez Gene: 9271 Human

Entrez Gene: 57749 Mouse

Entrez Gene: 363912 Rat

Omim: 605571 Human

SwissProt: Q96J94 Human

SwissProt: Q9JMB7 Mouse

Unigene: 405659 Human

Unigene: 272720 Mouse

Unigene: 131387 Rat

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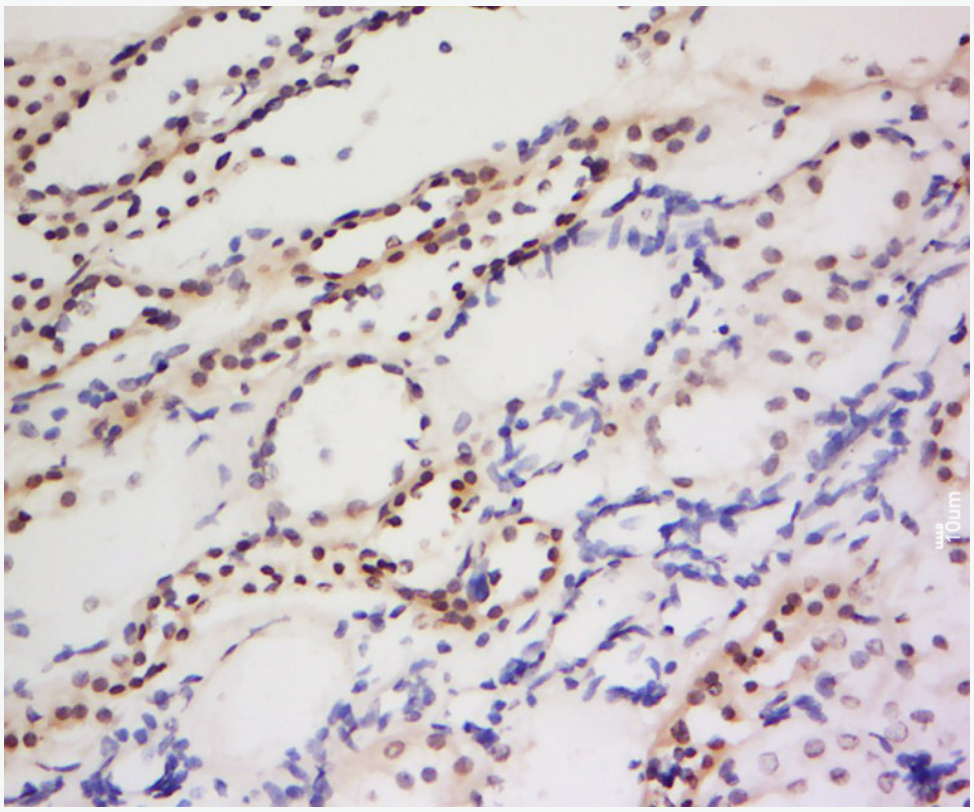
Product Picture



Tissue/cell: human kidney tissue; 4% Paraformaldehyde-fixed and paraffin-embedded;

Antigen retrieval: citrate buffer (1M, pH 6.0), Boiling bathing for 15min;

Block endogenous peroxidase by 3% Hydrogen peroxide for 30min;

Blocking buffer (normal goat serum,C-0005) at 37℃ for 20 min;

Incubation: Anti-PIWIL1 Polyclonal Antibody, Unconjugated(SL0665R) 1:200, overnight at 4°C, followed by conjugation to the secondary antibody(SP-0023) and DAB(C-0010) staining