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PIWIL1 (PIWI) Antibody (Center) Blocking peptide

Synthetic peptide
Catalog # BP2731c

Specification

PIWIL1 (PIWI) Antibody (Center) Blocking peptide - Product Information

Primary Accession Q96J94

PIWIL1 (PIWI) Antibody (Center) Blocking peptide - Additional Information

Gene ID 9271

Other Names
Piwi-like protein 1, PIWIL1, HIWI

Target/Specificity
The synthetic peptide sequence used to generate the antibody AP2731c was selected from the Center region of human PIWIL1. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

PIWIL1 (PIWI) Antibody (Center) Blocking peptide - 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

PIWIL1 (PIWI) Antibody (Center) Blocking peptide - Protocols

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

- Blocking Peptides

PIWIL1 (PIWI) Antibody (Center) Blocking peptide - Images

PIWIL1 (PIWI) Antibody (Center) Blocking peptide - Background

PIWIL1 is 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. This protein may play a role as an intrinsic regulator of the self-renewal capacity of germline and hematopoietic stem cells.

PIWIL1 (PIWI) Antibody (Center) Blocking peptide - References

Taubert,H., Oncogene 26 (7), 1098-1100 (2007)Liu,X., Int. J. Cancer 118 (8), 1922-1929 (2006)Qiao,D., Oncogene 21 (25), 3988-3999 (2002)