

PIWIL2 Antibody (N-term) Blocking Peptide
Synthetic peptide
Catalog # BP19056a**Specification**

PIWIL2 Antibody (N-term) Blocking Peptide - Product InformationPrimary Accession [Q8TC59](#)**PIWIL2 Antibody (N-term) Blocking Peptide - Additional Information****Gene ID** 55124**Other Names**

Piwi-like protein 2, Cancer/testis antigen 80, CT80, PIWIL2, HILI

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.

PIWIL2 Antibody (N-term) Blocking Peptide - Protein Information**Name** PIWIL2**Synonyms** HILI**Function**

Endoribonuclease that plays a central role during spermatogenesis by repressing transposable elements and preventing their mobilization, which is essential for the germline integrity (By similarity). Plays an essential role in meiotic differentiation of spermatocytes, germ cell differentiation and in self-renewal of spermatogonial stem cells (By similarity). 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 (By similarity). During piRNA biosynthesis, plays a key role in the piRNA amplification loop, also named ping-pong amplification cycle, by acting as a 'slicer-competent' piRNA endoribonuclease that cleaves primary piRNAs, which are then loaded onto 'slicer-incompetent' PIWIL4 (By similarity). PIWIL2 slicing produces a pre-miRNA intermediate, which is then processed in mature piRNAs, and as well as a 16 nucleotide by-product that is degraded (By similarity). Required for PIWIL4/MIWI2 nuclear localization and association with secondary piRNAs antisense (By similarity). Besides their function in transposable elements repression, piRNAs are probably involved in other processes during meiosis such as translation regulation (By similarity). Indirectly modulates expression of genes such as PDGFRB, SLC2A1, ITGA6, GJA7, THY1, CD9 and STRA8 (By similarity). When overexpressed, acts as an oncogene by

inhibition of apoptosis and promotion of proliferation in tumors (PubMed:16377660). Represses circadian rhythms by promoting the stability and activity of core clock components BMAL1 and CLOCK by inhibiting GSK3B-mediated phosphorylation and ubiquitination-dependent degradation of these proteins (PubMed:28903391).

Cellular Location

Cytoplasm {ECO:0000250|UniProtKB:Q8CDG1}. Note=Present in chromatoid body. Probable component of the meiotic nuage, also named P granule, a germ-cell-specific organelle required to repress transposon activity during meiosis {ECO:0000250|UniProtKB:Q8CDG1}

Tissue Location

Expressed in adult testis and in most tumors.

PIWIL2 Antibody (N-term) Blocking Peptide - Protocols

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

- [Blocking Peptides](#)

PIWIL2 Antibody (N-term) Blocking Peptide - Images**PIWIL2 Antibody (N-term) Blocking Peptide - Background**

PIWIL2 belongs to the Argonaute family of proteins, which function in development and maintenance of germline stem cells (Sasaki et al., 2003 [PubMed 12906857]).

PIWIL2 Antibody (N-term) Blocking Peptide - References

Lee, J.H., et al. Cancer Res. 70(11):4569-4579(2010) Liu, J.J., et al. Int J Clin Exp Pathol 3(4):328-337(2010) Nikpour, P., et al. Cancer Epidemiol 33 (3-4), 271-275 (2009) :Lee, J.H., et al. Hum. Mol. Genet. 15(2):201-211(2006) Kuramochi-Miyagawa, S., et al. Development 131(4):839-849(2004)