

PIWIL3 (N-20): sc-68718

BACKGROUND

PIWIL3 (piwi-like 3), also known as HIWI3, is an 882 cytoplasmic protein that belongs to the argonaute family. Expressed in testis, PIWIL3 may participate in spermatogenesis by repressing transposable elements and preventing mobilization, which is essential for germline integrity. PIWIL3 may act via the piRNA metabolic process, which mediates the repression of transposable elements during meiosis by forming complexes composed of piRNAs and PIWI proteins while governing the methylation and subsequent repression of transposons. PIWIL3 directly binds 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. PIWIL3 may also be involved in human specific tumor pathogenesis. The gene encoding PIWIL3 maps to human chromosome 22, which houses over 500 genes and is the second smallest human chromosome.

REFERENCES

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- Sasaki, T., et al. 2003. Identification of eight members of the Argonaute family in the human genome small star, filled. *Genomics* 82: 323-330.
- Seto, A.G., et al. 2007. The coming of age for Piwi proteins. *Mol. Cell* 26: 603-609.
- Peters, L. and Meister, G. 2007. Argonaute proteins: mediators of RNA silencing. *Mol. Cell* 26: 611-623.
- Farazi, T.A., et al. 2008. The growing catalog of small RNAs and their association with distinct Argonaute/Piwi family members. *Development* 135: 1201-1214.
- Höck, J. and Meister, G. 2008. The Argonaute protein family. *Genome Biol.* 9: 210.
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CHROMOSOMAL LOCATION

Genetic locus: PIWIL3 (human) mapping to 22q11.23.

SOURCE

PIWIL3 (N-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of PIWIL3 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-68718 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

For research use only, not for use in diagnostic procedures.

APPLICATIONS

PIWIL3 (N-20) is recommended for detection of PIWIL3 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for PIWIL3 siRNA (h): sc-76153, PIWIL3 shRNA Plasmid (h): sc-76153-SH and PIWIL3 shRNA (h) Lentiviral Particles: sc-76153-V.

Molecular Weight of PIWIL3: 101 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.



Try **PIWIL3 (C-3): sc-398779**, our highly recommended monoclonal alternative to PIWIL3 (N-20).