

#### DESCRIPTION

|                                                                                                                                                                                                         |                                                                                             |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|
| <b>Species Reactivity</b>                                                                                                                                                                               | Human/Mouse                                                                                 |
| <b>Specificity</b>                                                                                                                                                                                      | Detects human PIWIL1/HIWI in direct ELISAs.                                                 |
| <b>Source</b>                                                                                                                                                                                           | Polyclonal Goat IgG                                                                         |
| <b>Purification</b>                                                                                                                                                                                     | Antigen Affinity-purified                                                                   |
| <b>Immunogen</b>                                                                                                                                                                                        | <i>E. coli</i> -derived recombinant human PIWIL1/HIWI<br>Arg82-Thr290<br>Accession # Q96J94 |
| <b>Conjugate</b>                                                                                                                                                                                        | Alexa Fluor 532<br>Excitation Wavelength: 534 nm<br>Emission Wavelength: 553 nm             |
| <b>Formulation</b>                                                                                                                                                                                      | Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide                                |
| *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions. |                                                                                             |

#### APPLICATIONS

**Please Note:** Optimal dilutions should be determined by each laboratory for each application. [General Protocols](#) are available in the Technical Information section on our website.

**Immunohistochemistry** Optimal dilution of this antibody should be experimentally determined.

#### PREPARATION AND STORAGE

|                                |                                                                                                                   |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------|
| <b>Shipping</b>                | The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below. |
| <b>Stability &amp; Storage</b> | Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied                          |

#### BACKGROUND

PIWI (P-element-induced wimpy testis; also HIWI and PIWIL1) is a 92-98 kDa member of the Piwi subfamily, Argonaute family of proteins. It is expressed in germline cells, particularly spermatocytes and spermatids, and also appears in CD34+ hematopoietic stem cells plus select tumor types. PIWI binds to a series of 28-34 nucleic acid long noncoding RNAs that participate in gametogenesis. It does so under the influence of Arg methyltransferases, and in conjunction with Tudor-containing proteins. Human PIWI/PIWIL1 is 861 amino acids (aa) in length. It contains a methylation target region in the N-terminus, followed by an RNA-binding PAZ domain (aa 277-391) and an RNA-cleaving PIWI domain (aa 555-847). There are two isoform variants. One is widely expressed and shows a three aa substitution for aa 1-89. The second contains a six aa substitution for aa 824-861. Over aa 82-290, human PIWI (HIWI) shares 95% aa sequence identity with mouse PIWI (MIWI).

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