SANTA CRUZ BIOTECHNOLOGY, INC.

PIWIL2 (M-240): sc-67304

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

PIWIL2 (PIWI-like protein 2), also known as HILI and cancer/testis antigen 80 (CT80), is a 973 amino acid protein that belongs to the argonaute family. PIWIL2 contains one PAZ domain and one PIWI domain. PIWIL2 is a cytoplasmic protein that is expressed in adult testis and in most tumors. It regulates spermatogenesis and primordial germ cell production and has an essential role in meiotic differentiation of spermatocytes and in self-renewal of spermatogonial stem cells. Expression of PIWIL2 can modulate expression of genes involved in stem cell proliferation (such as PDGFR-b), in energy metabolism (such as Glut1), in cell-cell interaction (such as Integrin a6, GJA7, THY-1 and CD9), and in germ cell differentiation (such as STRA8). It may also play a role as a regulatory factor of Stat3/Bcl-$x_{S/L}$/CCND1 pathway. Repression of PIWIL2 can inhibit tumor cell growth. PIWIL2 acts as an oncogene by inhibition of apoptosis and promotion of proliferation in tumors.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: PIWIL2 (human) mapping to 8p21.3; Piwil2 (mouse) mapping to 14 D2.

SOURCE

PIWIL2 (M-240) is a rabbit polyclonal antibody raised against amino acids 14-240 mapping at the N-terminus of PIWIL2 of mouse origin.

PRODUCT

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

APPLICATIONS

PIWIL2 (M-240) is recommended for detection of PIWIL2 of mouse, rat and, to a lesser extent, human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], 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 PIWIL2 siRNA (h): sc-62456, PIWIL2 siRNA (m): sc-62457, PIWIL2 shRNA Plasmid (h): sc-62456-SH, PIWIL2 shRNA Plasmid (m): sc-62457-SH, PIWIL2 shRNA (h) Lentiviral Particles: sc-62456-V and PIWIL2 shRNA (m) Lentiviral Particles: sc-62457-V.

Molecular Weight of PIWIL2: 110 kDa.

Positive Controls: rat testis extract: sc-2400.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (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.

RESEARCH USE

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

PROTOCOLS

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