

Anti-PIWIL4 Polyclonal Antibody

Cat: K110402P

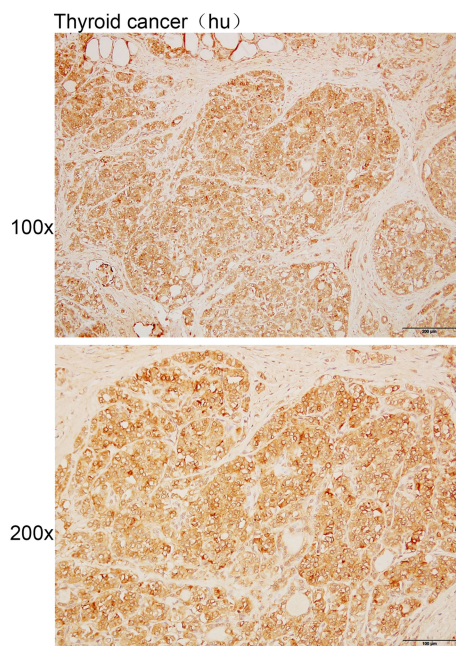
Summary:

【Product name】 : Anti-PIWIL4 antibody	【Source】 : Rabbit
【Isotype】 : IgG	【Species reactivity】 : Human Mouse Rat
【Swiss Prot】 : Q7Z3Z4	【Gene ID】 : 143689
【Calculated】 : MW:52/56/96kDa	
【Purification】 : Affinity purification	
【Tested applications】 : IHC	
【Recommended dilution】 : IHC 1:50-200.	
【IHC Positive sample】 : Human thyroid cancer	
【Subcellular location】 : Cytoplasm Nucleus	
【Immunogen】 : Recombinant protein of human PIWIL4	
【Storage】 : Shipped at 4°C. Upon delivery aliquot and store at -20°C	

Background:

Plays a central role during spermatogenesis 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 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. Associates with secondary piRNAs antisense and PIWIL2/MILI is required for such association. The piRNA process acts upstream of known mediators of DNA methylation. Does not show endonuclease activity (By similarity). Plays a key role in the piRNA amplification loop, also named ping-pong amplification cycle, by acting as a 'slicer-incompetent' component that loads cleaved piRNAs from the 'slicer-competent' component PIWIL2 and target them on genomic transposon loci in the nucleus. May be involved in the chromatin-modifying pathway by inducing 'Lys-9' methylation of histone H3 at some loci. In addition to its role in germline, PIWIL4 also plays a role in the regulation of somatic cells activities. Plays a role in pancreatic beta cell function and insulin secretion (By similarity). Involved in maintaining cell morphology and functional integrity of retinal epithelial through Akt/GSK3alpha/beta signaling pathway. When overexpressed, acts as an oncogene by inhibition of apoptosis and promotion of cells proliferation in tumors.

Verified picture



Immunohistochemistry of paraffin-embedded
Human thyroid cancer using PIWIL4 antibody
diluted at 1:100