

Product datasheet for TP524497

Piwil4 (NM_177905) Mouse Recombinant Protein

Product data:

Product Type:	Recombinant Proteins
Description:	Purified recombinant protein of Mouse piwi-like RNA-mediated gene silencing 4 (Piwil4), with C-terminal MYC/DDK tag, expressed in HEK293T cells, 20ug
Species:	Mouse
Expression Host:	HEK293T
Expression cDNA Clone or AA Sequence:	>MR224497 representing NM_177905 Red=Cloning site Green=Tags(s)

MRLRILGVHRALPTHARVAVCSNYLGKLEYSQTPSHSHTVSAFEKETLLLRILTSPGKPLAPRNMSGRARV
RARGITTGHSAREVGRSSRDLMVTSASPGDSEAGGGTVISQPYELGVSSGDGGRTFMERRGKGRQDFEE
LGVCTREKLTHVKDCKTGSSGIPVRLVTNLFNLDLPQDWQLYQYHVYSPDLASRRRLIALYNSILSD
KAKAFDGLSLFLSEKLDQKVTELTSETQRGETIKITLTLTKLFPNSPVCIQFFNVIFRKILKNLSMYQI
GRNFYKPSEPVEIPQYNKLLFNADVNYKVLNRNETVDFMTDCLRTGMSCFTEMCHKQLVGLVVLTRYNN
KTYRIDIDWSVKPTQAFQKRDGSEVTYVDYKQYDITLSDLNQPVLVSLKRRKNDNSEPQMVHLMPE
LCFLTGLSSQATSDFRMLKAVAEETRLSPVGRQQQLARLVDDIQRTPSSQEVLSHTSLPLWAPEPGGLS
SAIPLSTVLPFAQQLLTALSLSPIPLPHLKPPSFLFCQPAFAADWSKDMRCKVLSSQPLNRWLIVCC
NRAEHLIEAFLSCLRRVGGSMGFNVGYPKIIKVDETPA AFLRAIQVHGDPDVQLVMCILPSNQKNYYDSI
KKYLSSDCPVPSQCVLTRTLNKQGTMLSVATKIAMQMTCKLGGELWSVEIPLKSLMVVGGIDICRDALNKN
VVVGFVASINSRITRWFSRCVLQRTAADIADCLKVCMTGALNRWYRHNHDLPARIVVYRDGVGNGQLKA
VLEYEVPQLLSVTECGSDARYDFYLISQTANRGTVSPHYNVIYDDNALKPDHMQRLLTFKLCHLYYNWQ
GLISVPAPCQYAHKLTFLVAQSVHKEPSLELANNLFYL

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Tag:	C-MYC/DDK
Predicted MW:	99.1 kDa
Concentration:	>0.05 µg/µL as determined by microplate BCA method
Purity:	> 80% as determined by SDS-PAGE and Coomassie blue staining
Buffer:	25 mM Tris-HCl, 100 mM glycine, pH 7.3, 10% glycerol
Note:	For testing in cell culture applications, please filter before use. Note that you may experience some loss of protein during the filtration process.



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Storage:	Store at -80°C after receiving vials.
Stability:	Stable for 12 months from the date of receipt of the product under proper storage and handling conditions. Avoid repeated freeze-thaw cycles.
Locus ID:	330890
UniProt ID:	Q8CGT6 , A0A0R4J0Y7
RefSeq Size:	2637
Cytogenetics:	9 A2
RefSeq ORF:	2634
Synonyms:	9230101H05Rik; Miwi2
Summary:	<p>Plays a central role during spermatogenesis by repressing transposable elements and preventing their mobilization, which is essential for the germline integrity (PubMed:17395546, PubMed:18381894, PubMed:18922463, PubMed:26669262, PubMed:22020280). 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 (PubMed:17395546, PubMed:18381894, PubMed:18922463, PubMed:26669262, PubMed:22020280). 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 (PubMed:17395546, PubMed:18381894, PubMed:18922463, PubMed:26669262, PubMed:22020280). The piRNA process acts upstream of known mediators of DNA methylation (PubMed:17395546, PubMed:18381894, PubMed:18922463, PubMed:26669262, PubMed:22020280). Does not show endonuclease activity (PubMed:22020280). 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 (PubMed:22020280). 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 (By similarity).</p> <p>[UniProtKB/Swiss-Prot Function]</p>