Datasheet for ABIN7564542

PIWIL2 Protein (AA 1-971) (His tag)

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Overview

Quantity:	1 mg
Target:	PIWIL2
Protein Characteristics:	AA 1-971
Origin:	Mouse
Source:	HEK-293 Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This PIWIL2 protein is labelled with His tag.

Product Details

Purpose:	Custom-made recombinant Piwil2 Protein expressed in mammalian cells.
Sequence:	MDPVRPLFRG PTPVHPSQCV RMPGCWPQAP RPLEPAWGRA GPAGRGLVFR KPEDSSPPLQ PVQKDSVGLV SMFRGMGLDT AFRPPSKREV PPLGRGVLGR GLSANMVRKD REEPRSSLPD PSVLAAGDSK LAEASVGWSR MLGRGSSEVS LLPLGRAASS IGRGMDKPPS AFGLTARDPP RLPQPPALSP TSLHSADPPP VLTMERKEKE LLVKQGSKGT PQSLGLNLIK IQCHNEAVYQ YHVTFSPSVE CKSMRFGMLK DHQSVTGNVT AFDGSILYLP VKLQQVVELK SQRKTDDAEI SIKIQLTKIL EPCSDLCIPF YNVVFRRVMK LLDMKLVGRN FYDPTSAMVL QQHRLQIWPG YAASIRRTDG GLFLLADVSH KVIRNDSVLD VMHAIYQQNK EHFQDECSKL LVGSIVITRY NNRTYRIDDV DWNKTPKDSF VMSDGKEITF LEYYSKNYGI TVKEDDQPLL IHRPSERQNN HGMLLKGEIL LLPELSFMTG IPEKMKKDFR AMKDLTQQIN LSPKQHHGAL ECLLQRISQN ETASNELTRW GLSLHKDVHK IEGRLLPMER INLRNTSFVT SEDLNWVKEV TRDASILTIP MHFWALFYPK RAMDQARELV NMLEKIAGPI GMRISPPAWV ELKDDRIETY IRTIQSLLGV EGKIQMVVCI IMGTRDDLYG AIKKLCCVQS PVPSQVINVR TIGQPTRLRS VAQKILLQMN

Product Details

	CKLGGELWGV DIPLKQLMVI GMDVYHDPSR GMRSVVGFVA SINLTLTKWY SRVVFQMPHQ EIVDSLKLCL VGSLKKYYEV NHCLPEKIVV YRDGVSDGQL KTVANYEIPQ LQKCFEAFDN YHPKMVVFVV QKKISTNLYL AAPDHFVTPS PGTVVDHTIT SCEWVDFYLL AHHVRQGCGI PTHYICVLNT ANLSPDHMQR LTFKLCHMYW NWPGTIRVPA PCKYAHKLAF LSGQILHHEP AIQLCGNLFF L **Sequence without tag. The proposed Purification-Tag is based on experiences with the expression system, a different complexity of the protein could make another tag necessary. In case you have a special request, please contact us.**
Specificity:	If you are looking for a specific domain and are interested in a partial protein or a different isoform, please contact us regarding an individual offer.
Characteristics:	Key Benefits: • Made to order protein - from design to production - by highly experienced protein experts. • Protein expressed in mammalian cells and purified in one-step affinity chromatography • The optimized expression system ensures reliability for intracellular, secreted and transmembrane proteins. • State-of-the-art algorithm used for plasmid design (Gene synthesis). This protein is a made-to-order protein and will be made for the first time for your order. Our experts in the lab try to ensure that you receive soluble protein. If you are not interested in a full length protein, please contact us for individual protein fragments. The big advantage of ordering our made-to-order proteins in comparison to ordering custom made proteins from other companies is that there is no financial obligation in case the protein cannot be expressed or purified.
Purity:	> 90 % as determined by Bis-Tris PAGE, anti-tag ELISA, Western Blot and analytical SEC (HPLC)
Grade:	custom-made

Target Details

Target:	PIWIL2
Alternative Name:	Piwil2 (PIWIL2 Products)
Background:	Piwi-like protein 2 (EC 3.1.26.-),FUNCTION: Endoribonuclease that plays a central role during spermatogenesis by repressing transposable elements and preventing their mobilization, which is essential for the germline integrity (PubMed:11578866, PubMed:14736746, PubMed:17446352, PubMed:18381894, PubMed:18922463, PubMed:26669262). Plays an

	essential role in meiotic differentiation of spermatocytes, germ cell differentiation and in self-renewal of spermatogonial stem cells (PubMed:11578866, PubMed:14736746, PubMed:17446352, PubMed:18381894, PubMed:18922463, PubMed:26669262). Its presence in oocytes suggests that it may participate in similar functions during oogenesis in females (PubMed:11578866, PubMed:14736746, PubMed:17446352, PubMed:18381894, PubMed:18922463, PubMed:26669262). 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 govern the methylation and subsequent repression of transposons (PubMed:11578866, PubMed:14736746, PubMed:17446352, PubMed:18381894, PubMed:18922463, PubMed:26669262). During piRNA biosynthesis, plays a key role in the piRNA amplification loop, also named ping-pong amplification cycle, by acting as a 'slicer-competent' piRNA endoribonuclease that cleaves primary piRNAs, which are then loaded onto 'slicer-incompetent' PIWIL4 (PubMed:22020280, PubMed:23706823, PubMed:26669262). PIWIL2 slicing produces a pre-miRNA intermediate, which is then processed in mature piRNAs, and as well as a 16 nucleotide by-product that is degraded (PubMed:28633017). Required for PIWIL4/MIWI2 nuclear localization and association with secondary piRNAs antisense (PubMed:18381894, PubMed:18922463, PubMed:26669262). Besides their function in transposable elements repression, piRNAs are probably involved in other processes during meiosis such as translation regulation (PubMed:19114715). Indirectly modulates expression of genes such as PDGFRB, SLC2A1, ITGA6, GJA7, THY1, CD9 and STRA8 (PubMed:16261612). Represses circadian rhythms by promoting the stability and activity of core clock components BMAL1 and CLOCK by inhibiting GSK3B-mediated phosphorylation and ubiquitination-dependent degradation of these proteins (PubMed:28903391). {ECO:0000269|PubMed:11578866, ECO:0000269|PubMed:14736746, ECO:0000269|PubMed:16261612, ECO:0000269|PubMed:17446352, ECO:0000269|PubMed:18381894, ECO:0000269|PubMed:18922463, ECO:0000269|PubMed:19114715, ECO:0000269|PubMed:22020280, ECO:0000269|PubMed:23706823, ECO:0000269|PubMed:26669262, ECO:0000269|PubMed:28633017, ECO:0000269|PubMed:28903391}.
Molecular Weight:	109.5 kDa
UniProt:	Q8CDG1
Pathways:	Stem Cell Maintenance

Application Details

Application Notes:	We expect the protein to work for functional studies. As the protein has not been tested for functional studies yet we cannot offer a guarantee though.
Restrictions:	For Research Use only

Handling

Format:	Liquid
Buffer:	The buffer composition is at the discretion of the manufacturer.
Handling Advice:	Avoid repeated freeze-thaw cycles.
Storage:	-80 °C
Storage Comment:	Store at -80°C.
Expiry Date:	12 months