Datasheet for ABIN7564574

PIWIL4 Protein (AA 1-848) (His tag)

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Overview

Quantity:	1 mg
Target:	PIWIL4
Protein Characteristics:	AA 1-848
Origin:	Mouse
Source:	HEK-293 Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This PIWIL4 protein is labelled with His tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS)

Product Details

Purpose:	Custom-made recombinat Piwil4 Protein expressed in mammalien cells.
Sequence:	MSGRARVRAR GITTGHSARE VGRSSRDLMV TSASPGDSEA GGGTSVISQP YELGVSSGDG GRTFMERRGK GRQDFEELGV CTREKLTHVK DCKTGSSGIP VRLVTNLFNL DLPQDWQLYQ YHVTYSPDLA SRRLRIALLY NHSILSDKAK AFDGASLFLS EKLDQKVTEL TSETQRGETI KITLTLTSKL FPNSPVCIQF FNVIFRKILK NLSMYQIGRN FYKPSEPVEI PQYKLSLWPG FAISVSHFES KLLFNADVNY KVLRNETVLD FMTDLCLRTG MSCFTEMCHK QLVGLVVLTR YNNKTYRIDD IDWSVKPTQA FQKRDGSEVT YVDYYKQQYD ITLSDLNQPV LVSLLKRKRN DNSEPQMVHL MPELCFLTGL SSQATSDFRL MKAVAEETRL SPVGRQQQLA RLVDDIQRNP VARFELETWG LHFGSQLSLT GRVVPSEKIL LQDHTCQPAF AADWSKDMRS CKVLSSQPLN RWLIVCCNRA EHLIEAFLSC LRRVGGSMGF NVGYPKIIKV DETPAAFLRA IQVHGDPDVQ LVMCILPSNQ KNYYDSIKKY LSSDCPVPSQ CVLTRTLNKQ GTMLSVATKI AMQMTCKLGG ELWSVEIPLK SLMVVGIDIC RDALNKNVVV VGFVASINSR ITRWFSRCVL QRTAADIADC

Product Details

	LKVCMTGALN RWYRHNHDLP ARIVVYRDGV GNGQLKAVLE YEVPQLLKSV TECGSDARSC RLSVVVVRKR CLLRLFASTD HTVQNPPLGT VVDSEATRPE WYDFYLISQT ANRGTVSPTH YNVIYDDNAL KPDHMQRLTF KLCHLYYNWQ GLISVPAPCQ YAHKLTFLVA QSVHKEPSLE LANNLFYL **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.**
Characteristics:	Key Benefits: • Made to order protein - from design to production - by highly experienced protein experts. • Protein expressed in mammalien 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, Western Blot
Grade:	custom-made

Target Details

Target:	PIWIL4
Alternative Name:	Piwil4 (PIWIL4 Products)
Background:	Piwi-like protein 4 (mAgo5),FUNCTION: 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,

Target Details

	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). {ECO:0000250|UniProtKB:Q4G033, ECO:0000250|UniProtKB:Q7Z3Z4, ECO:0000269|PubMed:17395546, ECO:0000269|PubMed:18381894, ECO:0000269|PubMed:18922463, ECO:0000269|PubMed:22020280, ECO:0000269|PubMed:26669262}.
Molecular Weight:	95.8 kDa
UniProt:	Q8CGT6

Application Details

Application Notes:	In addition to the applications listed above we expect the protein to work for functional studies as well. 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

Handling

Storage Comment:	Store at -80°C.
Expiry Date:	12 months

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