Datasheet for ABIN3094563

PIWIL2 Protein (AA 1-973) (His tag)

1 Image

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Overview

Quantity:	1 mg
Target:	PIWIL2
Protein Characteristics:	AA 1-973
Origin:	Human
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This PIWIL2 protein is labelled with His tag.
Application:	Crystallization (Crys), ELISA, SDS-PAGE (SDS), Western Blotting (WB)

Product Details

Sequence:	MDPFRPSFRG QSPIHPSQCQ AVRMPGCWPQ ASKPLDPALG RGAPAGRGHV FGKPEEPSTQ RGPAQRESVG LVSMFRGLGI ETVSKTPLKR EMLPSGRGIL GRGLSANLVR KDREELSPTF WDPKVLAAGD SKMAETSVGW SRTLGRGSSD ASLLPLGRAA GGISREVDKP PCTFSTPSRG PPQLSSPPAL PQSPLHSPDR PLVLTVEHKE KELIVKQGSK GTPQSLGLNL VKIQCHNEAV YQYHVTFSPN VECKSMRFGM LKDHQAVTGN VTAFDGSILY LPVKLQQVLE LKSQRKTDSA EISIKIQMTK ILEPCSDLCI PFYNVVFRRV MKLLDMKLVG RNFYDPTSAM VLQQHRLQIW PGYAASIRRT DGGLFLLADV SHKVIRNDCV LDVMHAIYQQ NKEHFQDECT KLLVGNIVIT RYNNRTYRID DVDWNKTPKD SFTMSDGKEI TFLEYYSKNY GITVKEEDQP LLIHRPSERQ DNHGMLLKGE ILLLPELSFM TGIPEKMKKD FRAMKDLAQQ INLSPKQHHS ALECLLQRIA KNEAATNELM RWGLRLQKDV HKIEGRVLPM ERINLKNTSF ITSQELNWVK EVTRDPSILT IPMHFWALFY PKRAMDQARE LVNMLEKIAG PIGMRMSPPA WVELKDDRIE TYVRTIQSTL GAEGKIQMVV CIIMGPRDDL YGAIKKLCCV QSPVPSQVVN VRTIGQPTRL RSVAQKILLQ

	INCKLGGELW GVDIPLKQLM VIGMDVYHDP SRGMRSVVGF VASINLTLTK WYSRVVFQMP HQEIVDSLKL CLVGSLKKFY EVNHCLPEKI VVYRDGVSDG QLKTVANYEI PQLQKCFEAF ENYQPKMVVF VVQKKISTNL YLAAPQNFVT PTPGTVVDHT ITSCEWVDFY LLAHHVRQGC GIPTHYVCVL NTANLSPDHM QRLTFKLCHM YWNWPGTIRV PAPCKYAHKL AFLSGHILHH EPAIQLCENL FFL **Sequence without tag. Tag location is at the discretion of the manufacturer. If you have a special request, please contact us.**
Characteristics:	• Made in Germany - from design to production - by highly experienced protein experts. • Human PIWIL2 Protein (raised in Insect Cells) purified by multi-step, protein-specific process to ensure crystallization grade. • 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 will ensure that you receive a correctly folded protein. 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. In the unlikely event that the protein cannot be expressed or purified we do not charge anything (other companies might charge you for any performed steps in the expression process for custom-made proteins, e.g. fees might apply for the expression plasmid, the first expression experiments or purification optimization). When you order this made-to-order protein you will only pay upon receival of the correctly folded protein. With no financial risk on your end you can rest assured that our experienced protein experts will do everything to make sure that you receive the protein you ordered. The concentration of our recombinant proteins is measured using the absorbance at 280nm. The protein's absorbance will be measured in several dilutions and is measured against its specific reference buffer. The concentration of the protein is calculated using its specific absorption coefficient. We use the Expasy's protparam tool to determine the absorption coefficient of each protein.
Purification:	Two step purification of proteins expressed in baculovirus infected SF9 insect cells: 1. In a first purification step, the protein is purified from the cleared cell lysate using three different His-tag capture materials: high yield, EDTA resistant, or DTT resistant. Eluate fractions are analyzed by SDS-PAGE. 2. Protein containing fractions of the best purification are subjected to second purification step through size exclusion chromatography. Eluate fractions are analyzed by SDS-PAGE and Western blot.

Product Details

Purity:	>95 % as determined by SDS PAGE, Size Exclusion Chromatography and Western Blot.
Sterility:	0.22 µm filtered
Endotoxin Level:	Protein is endotoxin free.
Grade:	Crystallography grade

Target Details

Target:	PIWIL2
Alternative Name:	PIWIL2 (PIWIL2 Products)
Background:	Plays a central role during spermatogenesis by repressing transposable elements and preventing their mobilization, which is essential for the germline integrity. Plays an essential role in meiotic differentiation of spermatocytes, germ cell differentiation and in self-renewal of spermatogonial stem cells. Its presence in oocytes suggests that it may participate in similar functions during oogenesis in females. 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 primary piRNAs in the cytoplasm and is required for PIWIL4/MIWI2 nuclear localization and association with secondary piRNAs antisense. The piRNA process acts upstream of known mediators of DNA methylation. Participates in a piRNA amplification loop. Besides their function in transposable elements repression, piRNAs are probably involved in other processes during meiosis such as translation regulation. Indirectly modulate expression of genes such as PDGFRB, SLC2A1, ITGA6, GJA7, THY1, CD9 and STRA8 (By similarity). Inhibits tumor cell growth when repressed. When overexpressed, acts as an oncogene by inhibition of apoptosis and promotion of proliferation in tumors (PubMed:16377660). {ECO:0000250|UniProtKB:Q8CDG1, ECO:0000269|PubMed:16377660}.
Molecular Weight:	110.8 kDa Including tag.
UniProt:	Q8TC59
Pathways:	Stem Cell Maintenance

Application Details

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

Application Details

	as well. As the protein has not been tested for functional studies yet we cannot offer a gurantee though.
Comment:	In cases in which it is highly likely that the recombinant protein with the default tag will be insoluble our protein lab may suggest a higher molecular weight tag (e.g. GST-tag) instead to increase solubility. We will discuss all possible options with you in detail to assure that you receive your protein of interest.
Restrictions:	For Research Use only

Handling

Format:	Liquid
Buffer:	100 mM NaCL, 20 mM Hepes, 10% glycerol. pH value 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:	Unlimited (if stored properly)

Images

Image 1. „Crystallography Grade“ protein due to multi-step, protein-specific purification process