Datasheet for ABIN3136416

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

1 Image

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Overview

Quantity:	1 mg
Target:	PIWIL2
Protein Characteristics:	AA 1-971
Origin:	Mouse
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:	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

	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. 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. • Mouse 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 govern 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 modulates expression of genes such as PDGFRB, SLC2A1, ITGA6, GJA7, THY1, CD9 and STRA8. Inhibits tumor cell growth when repressed. {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:26669262}.
Molecular Weight:	110.4 kDa Including tag.
UniProt:	Q8CDG1
Pathways:	Stem Cell Maintenance

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 gurantee though.
Comment:	Protein has not been tested for activity yet. 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

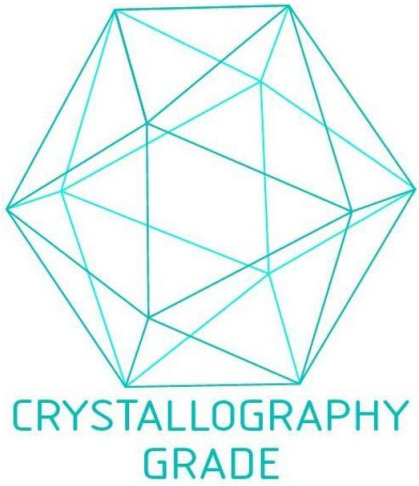

Image 1. „Crystallography Grade“ protein due to multi-step, protein-specific purification process