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Datasheet for ABIN3147590

**Klotho Protein (KL) (AA 35-982) (His tag)**

## Overview

Quantity:	2 mg
Target:	Klotho (KL)
Protein Characteristics:	AA 35-982
Origin:	Mouse
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This Klotho protein is labelled with His tag.
Application:	SDS-PAGE (SDS), Western Blotting (WB), ELISA, Crystallization (Crys)

## Product Details

Sequence:	AEPGQGAQTW ARFARAPAPE AAGLLHDTFP DGFLWAVGSA AYQTEGGWRQ HGKGASIWDT FTHHSGAAPS DSPIVVAPSG APSPPLSSTG DVASDSYNNV YRDTEGLREL GVTHYRFSIS WARVLPNGTA GTPNREGLRY YRLLERLRE LGVQPVTLY HWDLPQRLQD TYGGWANRAL ADHFRDYAEL CFRHFGGQVK YWITIDNPYV VAWHGYATGR LAPGVRGSSR LGYLVAHNLL LAHAKVWHLY NTSFRPTQGG RVSIALSSHW INPRRMTDYN IRECKSLDF VLGWFAKPIF IDGDYPESMK>NNLSSLLPDF TESEKRLIRG TADFFALSFG PTLSFQLLDP NMKFRQLESP NLRQLLSWID LEYNHPPIFI VENGWFVSGT TKRDDAKYMY YLKKFIMETL KAIRLDGVDV IGYTAWSLMD GFEWHRGYSI RRGLFYVDFL SQDKELLPKS SALFYQKLIE DNGFPPLPEN QPLEGTFPCD FAWGVDNYV QVDTTLSQFT DPNVYLWDVH HSKRLIKVDG VVAKKRKPYC VDFS AIRPQI TLLREMRVTH FRFSLDWALI LPLGNQTQVN HTVLHFYRCM ISELVHANIT PVVALWQPAA PHQGLPHALA KHGAWENPHT ALAFADYANL CFKELGHWVN LWITMNEPNT RNMTYRAGHH LLRAHALAWH LYDDKFRAAQ KKGISIALQA DWIEPACPFS QNDKEVAERV
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LEFDIGWLAE PIFGSGDYPR VMRDWLNQKN NLLPYFTED EKKLVRGSFD FLAVSHYTTI  
LVDWEKEDPM KYNDYLEVQE MTDITWLNSP SQVAVVPWGL RKVLNWLRFK YGDLPMYVTA  
NGIDDDPHAE QDSLRIYYIK NYVNEALKAY VLDDINLCGY FAYSLSDRSA PKSGFYRYAA  
NQFEPKPSMK HYRKIIDSNG FLGSGTLGRF CPEEYTVCTE CGFFQTRK

**Sequence without tag. Tag location is at the discretion of the manufacturer. If you have a special request, please contact us.**

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### Characteristics:

- Made in Germany - from design to production - by highly experienced protein experts.
- Mouse KI 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 receipt 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.

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### 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.

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### Purity:

>95 % as determined by SDS PAGE, Size Exclusion Chromatography and Western Blot.

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## Product Details

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Sterility:	0.22 µm filtered
Endotoxin Level:	Protein is endotoxin free.
Grade:	Crystallography grade

## Target Details

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Target:	Klotho (KL)
Alternative Name:	KI ( <a href="#">KL Products</a> )
Background:	May have weak glycosidase activity towards glucuronylated steroids. However, it lacks essential active site Glu residues at positions 241 and 874, suggesting it may be inactive as a glycosidase in vivo. May be involved in the regulation of calcium and phosphorus homeostasis by inhibiting the synthesis of active vitamin D. Essential factor for the specific interaction between FGF23 and FGFR1., The Klotho peptide generated by cleavage of the membrane-bound isoform may be an anti-aging circulating hormone which would extend life span by inhibiting insulin/IGF1 signaling.
Molecular Weight:	109.7 kDa Including tag.
UniProt:	<a href="#">O35082</a>
Pathways:	<a href="#">Fc-epsilon Receptor Signaling Pathway</a> , <a href="#">EGFR Signaling Pathway</a> , <a href="#">Neurotrophin Signaling Pathway</a> , <a href="#">Hormone Activity</a> , <a href="#">Growth Factor Binding</a>

## Application Details

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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.
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

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Format:	Liquid
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## Handling

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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)