

Datasheet for ABIN3118869

Klotho Protein (KL) (AA 34-1012) (rho-1D4 tag)



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Overview

Quantity:	1 mg
Target:	Klotho (KL)
Protein Characteristics:	AA 34-1012
Origin:	Human
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This Klotho protein is labelled with rho-1D4 tag.
Application:	SDS-PAGE (SDS), Western Blotting (WB), ELISA, Crystallization (Crys)

Product Details

Sequence:	<p>EPGDGAQTWA RFSRPPAPEA AGLFQGTFPD GFLWAVGSAA YQTEGGWQQH GKGASIWDTF</p> <p>THHPLAPPGD SRNASLPLGA PSPLQPATGD VASDSYNNVF RDTEALRELG VTHYRFSISW</p> <p>ARVLPNGSAG VPNREGLRYY RRLRLREL GVQPVVTLYH WDLPLQLQDA YGGWANRALA</p> <p>DHFRDYAELC FRHFGGQVKY WITIDNPYVV AWHGYATGRL APGIRGSPRL GYLVAHNLLL</p> <p>AHAKVWHLYN TSFRPTQGGQ VSIALSSHWI NPPRMTDHSI KECQKSLDFV LGWFAKPVFI</p> <p>DGDYPESMKN NLSSILPDFT ESEKKFIKGT ADFFALCFGP TLSFQLLDPH MKFRQLESPN</p> <p>LRQLLSWIDL EFNHPQIFIV ENGWFVSGTT KRDDAKYMY LKKFIMETLK AIKLDGVDVI</p> <p>GYTAWSLMDG FEWHRGYSIR RGLFYVDFLS QDKMLLPKSS ALFYQKLIK NGFPPLPENQ</p> <p>PLEGTFPCDF AWGVVDNYIQ VDTTSLSQFTD LNVYLWDVHH SKRLIKVDGV VTKKRKSYCV</p> <p>DFAAIQPQIA LLQEMHVTHF RFLSDWALIL PLGNQSQVNH TILQYYRCMA SELVRVNITP</p> <p>VVALWQPMAP NQGLPRLAR QGAWENPYTA LAFAEYARLC FQELGHHVKL WITMNEPYTR</p> <p>NMTYSAGHNL LKAHALAWHV YNEKFRHAQN GKISIALQAD WIEPACPFSSQ KDKEVAERVL</p>
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EFDIGWLAEP IFGSGDYPWV MRDWLNQRNN FLLPYFTEDE KKLIQGTDFD LALSHYTTIL
VDSEKEDPIK YNDYLEVQEM TDITWLNSPS QVAVVPWGLR KVLNWLKFKY GDLPMYIISN
GIDDGLHAED DQLRVYYMQN YINEALKAHI LDGINLCGYF AYSFNDRTAP RFGLYRYAAD
QFEPKASMKH YRKIIDSNGF PGPETLERFC PEEFTVCTEC SFFHTRKSLL AFIAFLFFAS
IISLSLIFY SKKGRRSYK

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 KL 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.

Purification:

Three step purification of membrane proteins expressed in baculovirus infected SF9 insect cells:

1. Membrane proteins are fractionated by ultracentrifugation and subsequently solubilized with different detergents (detergent screen). Samples are analyzed by Western blot.
2. The best performing detergent is used for solubilization and the proteins are purified via their rho1D4 tag via two rho1D4 antibody columns: one DTT resistant, the other one not. Eluate fractions are analyzed by Western blot.
3. Protein containing fractions of the best purification are subjected to second purification step

Product Details

through size exclusion chromatograph. Eluate fractions are analyzed by SDS-PAGE and Western blot.

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:	Klotho (KL)
Alternative Name:	KL (KL Products)
Background:	May have weak glycosidase activity towards glucuronylated steroids. However, it lacks essential active site Glu residues at positions 239 and 872, 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 (By similarity). Essential factor for the specific interaction between FGF23 and FGFR1 (By similarity). {ECO:0000250}., 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. {ECO:0000250}.
Molecular Weight:	113.9 kDa Including tag.
UniProt:	Q9UEF7
Pathways:	Fc-epsilon Receptor Signaling Pathway , EGFR Signaling Pathway , Neurotrophin Signaling Pathway , Hormone Activity , Growth Factor Binding

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.
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)