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Datasheet for ABIN3092049

## DACH1 Protein (AA 1-760) (His tag)

### 1 Image

#### Overview

Quantity:	1 mg
Target:	DACH1
Protein Characteristics:	AA 1-760
Origin:	Human
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This DACH1 protein is labelled with His tag.
Application:	ELISA, Western Blotting (WB), Crystallization (Crys), SDS-PAGE (SDS)

#### Product Details

Sequence: MAVPAALIPP TQLVPPQPPI STSASSSGTT TSTSSATSSP APSIGPPASS GPTLFRPEPI  
 ASAAAAATV TSTGGGGGGG GGGSGGGGGS SGNNGGGGGG GGSNCNP NL AAASNGSGGG  
 GGGISAGGGV ASSTPINAST GSSSSSSSSS SSSSSSSSSS SSSSSCGPLP GKPVYSTPSP  
 VENTPQNNEC KMVDLRGAKV ASFTVEGCEL ICLPQAFDLF LKHLVGGLHT VYTKLKRLEI  
 TPVVCNVEQV RILRGLGAIQ PGNVRCKLIS RKDFETLYND CTNASSRPGR PPKRTQSVTS  
 PENSHPHVS VPGLMSPGII PPTGLTAAAA AAAAATNAAI AEAMKVKKIK LEAMSNYHAS  
 NNQHGADSEN GDMNSSVGSS DGSWDKETLP SSPSQGPQAS ITHPRMPGAR SLPLSHPLNH  
 LQQSHLLPNG LELPFMMMPH PLIPVSLPPA SVTMAMSQMN HLSTIANMAA AAQVQSPPSR  
 VETSVIKERV PDSPSPAPSL EEGRRPGSHP SSSRSSSVSS SPARTESSSD RIPVHQNGLS  
 MNQMLMGLSP NVLPGPKEGD LAGHDMGHES KRMHIEKDET PLSTPTARDS LDKLSLTGHG  
 QPLPPGFPSP FLFPDGLSSI ETLLTNIQGL LKVAIDNARA QEKQVQLEKT ELKMDFLRER  
 ELRETLEKQL AMEQKNRAIV QKRLKKEKKA KRKLQEALEF ETKRREQAEQ TLKQAASTDS

LRVLNDSLTP EIEADRSRGGGR TDAERTIQDG RLYLKTTVMY

**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.
- Human DACH1 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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Sterility:

0.22 µm filtered

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Endotoxin Level:

Protein is endotoxin free.

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## Product Details

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Grade: Crystallography grade

## Target Details

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Target: DACH1

Alternative Name: DACH1 ([DACH1 Products](#))

Background: Transcription factor that is involved in regulation of organogenesis. Seems to be a regulator of SIX1, SIX6 and probably SIX5. Corepression of precursor cell proliferation in myoblasts by SIX1 is switched to coactivation through recruitment of EYA3 to the SIX1-DACH1 complex. Transcriptional activation seems also to involve association of CREBBP. Seems to act as a corepressor of SIX6 in regulating proliferation by directly repressing cyclin-dependent kinase inhibitors, including the p27Kip1 promoter (By similarity). Inhibits TGF-beta signaling through interaction with SMAD4 and NCOR1. Binds to chromatin DNA via its DACHbox-N domain (By similarity). {ECO:0000250, ECO:0000269|PubMed:14525983}.

Molecular Weight: 79.6 kDa Including tag.

UniProt: [Q9UI36](#)

Pathways: [Feeding Behaviour](#)

## 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: 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

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.

## Handling

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Storage: -80 °C

Storage Comment: Store at -80°C.

Expiry Date: Unlimited (if stored properly)

## Images

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