

Datasheet for ABIN3135532  
**SIX2 Protein (AA 1-296) (His tag)**



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1 Image

Overview

Quantity:	1 mg
Target:	SIX2
Protein Characteristics:	AA 1-296
Origin:	Mouse
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This SIX2 protein is labelled with His tag.
Application:	ELISA, Western Blotting (WB), Crystallization (Crys), SDS-PAGE (SDS)

Product Details

Sequence: MSMLPTFGFT QEQVACVCEV LQQGGNIERL GRFLWSPAC EHLHKNESVL KAKAVVAFHR  
GNFRELYKIL ESHQFSPHNH AKLQQLWLKA HYIEAEKLRG RPLGAVGKYR VRRKFPLPRS  
IWDGEETSYC FKEKRSVLR EWYAHNPYPS PREKRELAEA TGLTTTQVSN WFKNRRQRDR  
AAEAKERENS ENSNSSHNP LASSLNGSGK SVLGSEDEK TPSGTPDHSS SSPALLSPP  
PPPGLPSLHS LGHPPGPSAV PVPVPGGGGA DPLQHHSLSLQ DSILNPMSAN LVDLGS

**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 Six2 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

## Product Details

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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: <ol style="list-style-type: none"><li>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.</li><li>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.</li></ol>
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

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Target:	SIX2
Alternative Name:	Six2 ( <a href="#">SIX2 Products</a> )
Background:	Transcription factor that plays an important role in the development of several organs, including kidney, skull and stomach. During kidney development, maintains cap mesenchyme multipotent

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## Target Details

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nephron progenitor cells in an undifferentiated state by opposing the inductive signals emanating from the ureteric bud and cooperates with WNT9B to promote renewing progenitor cells proliferation. Acts through its interaction with TCF7L2 and OSR1 in a canonical Wnt signaling independent manner preventing transcription of differentiation genes in cap mesenchyme such as WNT4. Also acts independently of OSR1 to activate expression of many cap mesenchyme genes, including itself, GDNF and OSR1. During craniofacial development plays a role in growth and elongation of the cranial base through regulation of chondrocyte differentiation (PubMed:20515681). During stomach organogenesis, controls pyloric sphincter formation and mucosal growth through regulation of a gene network including NKX2-5, BMPR1B, BMP4, SOX9 and GREM1 (PubMed:19660448). During branchial arch development, acts to mediate HOXA2 control over the insulin-like growth factor pathway (PubMed:18321982). Also may be involved in limb tendon and ligament development (PubMed:7720577). Plays a role in cell proliferation and migration (By similarity). {ECO:0000250|UniProtKB:Q9NPC8, ECO:0000269|PubMed:17036046, ECO:0000269|PubMed:18321982, ECO:0000269|PubMed:18682239, ECO:0000269|PubMed:19660448, ECO:0000269|PubMed:20515681, ECO:0000269|PubMed:21350016, ECO:0000269|PubMed:22902740, ECO:0000269|PubMed:24598167, ECO:0000269|PubMed:7720577}.

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Molecular Weight: 33.7 kDa Including tag.

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UniProt: [Q62232](#)

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Pathways: [Protein targeting to Nucleus](#)

## 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.

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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.

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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.
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