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Datasheet for ABIN3133881  
**SOX5 Protein (AA 1-763) (Strep Tag)**

### Overview

Quantity:	1 mg
Target:	SOX5
Protein Characteristics:	AA 1-763
Origin:	Mouse
Source:	Tobacco ( <i>Nicotiana tabacum</i> )
Protein Type:	Recombinant
Purification tag / Conjugate:	This SOX5 protein is labelled with Strep Tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS)

### Product Details

Sequence: MLTDPDLPQE FERMSSKRPA SPYGETDGEV AMVTSRQKVE EEESERLPAF HLPLHVSFPN  
KPHSEEFQPV SLLTQETCGP RTPTVQHNTM EVDGNKVMSS LSPYNSSTSP QKAEEGGRQS  
GESVSSAALG TPERRKGLA DVVDTLKQRK MEELIKNEPE DTPSIEKLLS KDWKDKLLAM  
GSGNFGEIKG TPESLAEKER QLMGMINQLT SLREQLLAH DEQKKLAASQ IEKQRQQMEL  
AKQQEQIAR QQQQLLQQQH KINLLQQIQ VQGQLPPLMI PVFPPDQRTL AAAAQQGFL  
PPGFSYKAGC SDYPVQLIP TTMAAAAAAT PGLGPLQLQQ FYAAQLAAMQ VSPGGKLLGL  
PQGNLGAAVS PTSIHTDKST NSPPPKSKDE VAQPLNLSAK PKTSDGKSPA SPTSPHMPAL  
RINSAGAPLK ASVPAALASP SARVSTIGYL NDHDAVTKAI QEARQMKEQL RREQQALD GK  
VAVVNSIGLS NCRTEKEKTT LESLTQQLAV KQNEEGKFSH GMMDFNMSGD SDGSAGVSES  
RIYRESRGRG SNEPHIKRPM NAFMVWAKDE RRKILQAFPD MHNSNISKIL GSRWKAMTNL  
EKQPYEEQA RLSKQHLEKY PDYKYKPRPK RTCLVDGKKL RIGYKAIMR NRRQEMRQYF  
NVGQQAQIPI ATAGVVYPSA IAMAGMPSPH LPSEHSSVSS SPEPGMPVIQ STYGAKGEEP

HIKEEIQ AED INGEIYEEYD EEEEDPDVDY GSDSENHIAG QAN

**Sequence without tag. The proposed Strep-Tag is based on experience s with the expression system, a different complexity of the protein could make another tag necessary. In case you have a special request, please contact us.**

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### Characteristics:

#### Key Benefits:

- Made in Germany - from design to production - by highly experienced protein experts.
- Protein expressed with ALiCE® and purified by multi-step, protein-specific process to ensure correct folding and modification.
- These proteins are normally active (enzymatically functional) as our customers have reported (not tested by us and not guaranteed).
- 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.

#### Expression System:

- ALiCE®, our Almost Living Cell-Free Expression System is based on a lysate obtained from *Nicotiana tabacum* c.v.. This contains all the protein expression machinery needed to produce even the most difficult-to-express proteins, including those that require post-translational modifications.
- During lysate production, the cell wall and other cellular components that are not required for protein production are removed, leaving only the protein production machinery and the mitochondria to drive the reaction. During our lysate completion steps, the additional components needed for protein production (amino acids, cofactors, etc.) are added to produce something that functions like a cell, but without the constraints of a living system - all that's needed is the DNA that codes for the desired protein!

#### Concentration:

- 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.
- We use the Expasy's protparam tool to determine the absorption coefficient of each protein.

### Purification:

Two step purification of proteins expressed in Almost Living Cell-Free Expression System

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## Product Details

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(ALiCE®):

1. In a first purification step, the protein is purified from the cleared cell lysate using StrepTag capture material. 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: ≥ 80 % as determined by SDS PAGE, Size Exclusion Chromatography and Western Blot.

Endotoxin Level: Low Endotoxin less than 1 EU/mg (< 0.1 ng/mg)

## Target Details

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Target: SOX5

Alternative Name: Sox5 ([SOX5 Products](#))

Background: Transcription factor SOX-5,FUNCTION: Transcription factor involved in chondrocytes differentiation and cartilage formation (PubMed:1396566, PubMed:11702786, PubMed:8078769, PubMed:15529345, PubMed:14993235). Specifically binds the 5'-AACAAAT-3' DNA motif present in enhancers and super-enhancers and promotes expression of genes important for chondrogenesis, including cartilage matrix protein-coding genes, such as COL2A1 and AGC1 (PubMed:9755172, PubMed:11702786, PubMed:26150426). Required for overt chondrogenesis when condensed prechondrocytes differentiate into early stage chondrocytes: SOX5 and SOX6 cooperatively bind with SOX9 on active enhancers and super-enhancers associated with cartilage-specific genes, and thereby potentiate SOX9's ability to transactivate (PubMed:11702786, PubMed:15529345, PubMed:14993235, PubMed:26150426). Not involved in precartilaginous condensation, the first step in chondrogenesis, during which skeletal progenitors differentiate into prechondrocytes (PubMed:14993235). Together with SOX6, required to form and maintain a pool of highly proliferating chondroblasts between epiphyses and metaphyses, to form columnar chondroblasts, delay chondrocyte prehypertrophy but promote hypertrophy, and to delay terminal differentiation of chondrocytes on contact with ossification fronts (PubMed:14993235). Binds to the proximal promoter region of the myelin protein MPZ gene (PubMed:26525805). {ECO:0000269|PubMed:11702786, ECO:0000269|PubMed:1396566, ECO:0000269|PubMed:14993235, ECO:0000269|PubMed:15529345, ECO:0000269|PubMed:26150426, ECO:0000269|PubMed:26525805, ECO:0000269|PubMed:8078769, ECO:0000269|PubMed:9755172}.

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Molecular Weight: 84.1 kDa

## Target Details

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UniProt: [P35710](#)

## 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: ALiCE®, our Almost Living Cell-Free Expression System is based on a lysate obtained from *Nicotiana tabacum* c.v.. This contains all the protein expression machinery needed to produce even the most difficult-to-express proteins, including those that require post-translational modifications.

During lysate production, the cell wall and other cellular components that are not required for protein production are removed, leaving only the protein production machinery and the mitochondria to drive the reaction. During our lysate completion steps, the additional components needed for protein production (amino acids, cofactors, etc.) are added to produce something that functions like a cell, but without the constraints of a living system - all that's needed is the DNA that codes for the desired protein!

Restrictions: For Research Use only

## Handling

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Format: Liquid

Buffer: The buffer composition is at the discretion of the manufacturer. If you have a special request, please contact us.

Handling Advice: Avoid repeated freeze-thaw cycles.

Storage: -80 °C

Storage Comment: Store at -80°C.

Expiry Date: Unlimited (if stored properly)