

Datasheet for ABIN3076990

SMAD6 Protein (AA 1-496) (Strep Tag)**1** Image[Go to Product page](#)

Overview

Quantity:	1 mg
Target:	SMAD6
Protein Characteristics:	AA 1-496
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This SMAD6 protein is labelled with Strep Tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS), ELISA

Product Details

Sequence: MFRSKRSLV RRLWRSRVVP DREEGGSGGG GGGDEDGSLG SRAEPAPRAR EGGGCGRSEV
RPVAPRRPRD AVGQRGAQGA GRRRRRAGGPP RPMSEPGAGA GSSLLDVAEP GGPGWLPESD
CETVTCCLFS ERDAAGAPRD ASDPLAGAAL EPAGGGRSRE ARSRLLLLLEQ ELKTVTYSL
KRLKERSLDT LLEAVESRGG VPGGCVLVPR ADLRLGGQPA PPQLLLGRLF RWPDLQHAVE
LKPLCGCHSF AAAADGPTVC CNPYHFSRLC GPESPPPPYS RLSPRDEYKP LDLS DSTLSY
TETEATNSLI TAPGEFSDAS MSPDATKPSH WCSVAYWEHR TRVGRLYAVY DQAVSIFYDL
PQGSGFCLGQ LNLEQRSESV RRTRSKIGFG ILLSKEPDGV WAYNRGEHPI FVNSPTLDAP
GGRALVVRKV PPGYSIKVFD FERGLQHAP EPDAADGPYD PNSVRISFAK GWGPCYSRQF
ITSCPCWLEI LLNNPR

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.

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 (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

Product Details

Western blot.

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)
Grade:	Crystallography grade

Target Details

Target:	SMAD6
Alternative Name:	SMAD6 (SMAD6 Products)
Background:	<p>Mothers against decapentaplegic homolog 6 (MAD homolog 6) (Mothers against DPP homolog 6) (SMAD family member 6) (SMAD 6) (Smad6) (hSMAD6),FUNCTION: Transforming growth factor-beta superfamily receptors signaling occurs through the Smad family of intracellular mediators. SMAD6 is an inhibitory Smad (i-Smad) that negatively regulates signaling downstream of type I transforming growth factor-beta (PubMed:9436979, PubMed:16951688, PubMed:22275001, PubMed:9759503, PubMed:10647776, PubMed:10708948, PubMed:10708949, PubMed:30848080). Acts as a mediator of TGF-beta and BMP anti-inflammatory activities. Suppresses IL1R-TLR signaling through its direct interaction with PEL1, preventing NF-kappa-B activation, nuclear transport and NF-kappa-B-mediated expression of pro-inflammatory genes (PubMed:16951688). Blocks the BMP-SMAD1 signaling pathway by competing with SMAD4 for receptor-activated SMAD1-binding (PubMed:9436979, PubMed:30848080). Binds to regulatory elements in target promoter regions (PubMed:16491121). {ECO:0000269 PubMed:16491121, ECO:0000269 PubMed:16951688, ECO:0000269 PubMed:22275001, ECO:0000269 PubMed:30848080, ECO:0000269 PubMed:9436979, ECO:0000303 PubMed:10647776, ECO:0000303 PubMed:10708948, ECO:0000303 PubMed:10708949, ECO:0000303 PubMed:9759503}.</p>
Molecular Weight:	53.5 kDa
UniProt:	O43541
Pathways:	Chromatin 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
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Application Details

	guarantee though.
Comment:	<p>ALiCE®, our Almost Living Cell-Free Expression System is based on a lysate obtained from <i>Nicotiana tabacum</i> 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.</p> <p>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!</p>
Restrictions:	For Research Use only

Handling

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)



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