

Datasheet for ABIN3095824

**TGFB1 Protein (AA 30-278) (His tag)**[Go to Product page](#)**1** Image

## Overview

|                               |  |
|-------------------------------|--|
| Quantity:                     | 1 mg   |
| Target:                       | TGFB1  |
| Protein Characteristics:      | AA 30-278  |
| Origin:                       | Human  |
| Source:                       | Escherichia coli (E. coli)   |
| Protein Type:                 | Recombinant  |
| Purification tag / Conjugate: | This TGFB1 protein is labelled with His tag.                         |
| Application:                  | SDS-PAGE (SDS), Western Blotting (WB), ELISA, Crystallization (Crys) |

## Product Details

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| Sequence:        | <p>LSTCKTIDME LVKRKRIEAI RGQILSKLRL ASPPSQGEVP PGPLPEAVLA LYNSTRDRVA<br/>GESAEPEPEP EADYYAKEVT RVL MVETHNE IYDKFKQSTH SIYMFNTSE LREAVPEPVL<br/>LSRAELRLLR LKLKVEQHVE LYQKYSNNSW RYLSNRLLAP SDSPEWLSFD VTGVVRQWLS<br/>RGGEIEGFRL SAHCSCDSRD NTLQVDINGF TTGRRGDLAT IHGMNRPFL LMATPLERAQ<br/>HLQSSRHRR</p> <p><b>Sequence without tag. Tag location is at the discretion of the manufacturer. If you have a special request, please contact us.</b></p>             |
| Characteristics: | <ul style="list-style-type: none"><li>• Made in Germany - from design to production - by highly experienced protein experts.</li><li>• Human TGFB1 Protein (raised in E. Coli) purified by multi-step, protein-specific process to ensure crystallization grade.</li><li>• State-of-the-art algorithm used for plasmid design (Gene synthesis).</li></ul> <p>This protein is a made to order protein and will be made for the first time for your order. Our</p> |

## 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 bacterial culture:<br><br>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.<br><br>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. |
| Purity:          | >95 % as determined by SDS PAGE, Size Exclusion Chromatography and Western Blot.  |
| Sterility:       | 0.22 µm filtered  |
| Endotoxin Level: | Endotoxin has not been removed. Please contact us if you require endotoxin removal.   |
| Grade:           | Crystallography grade   |

## Target Details

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| Target:           | TGFB1  |
| Alternative Name: | TGFB1 ( <a href="#">TGFB1 Products</a> )   |
| Background:       | Multifunctional protein that controls proliferation, differentiation and other functions in many cell types. Many cells synthesize TGFB1 and have specific receptors for it. It positively and |

## Target Details

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negatively regulates many other growth factors. It plays an important role in bone remodeling as it is a potent stimulator of osteoblastic bone formation, causing chemotaxis, proliferation and differentiation in committed osteoblasts. Can promote either T-helper 17 cells (Th17) or regulatory T-cells (Treg) lineage differentiation in a concentration-dependent manner. At high concentrations, leads to FOXP3-mediated suppression of RORC and down-regulation of IL-17 expression, favoring Treg cell development. At low concentrations in concert with IL-6 and IL-21, leads to expression of the IL-17 and IL-23 receptors, favoring differentiation to Th17 cells. Mediates SMAD2/3 activation by inducing its phosphorylation and subsequent translocation to the nucleus (PubMed:25893292). Can induce epithelial-to-mesenchymal transition (EMT) and cell migration in various cell types (PubMed:25893292). {ECO:0000250|UniProtKB:P04202, ECO:0000269|PubMed:25893292}.

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| Molecular Weight: | 29.4 kDa Including tag. |
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| UniProt: | <a href="#">P01137</a> |
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| Pathways: | <a href="#">EGFR Signaling Pathway</a> , <a href="#">Dopaminergic Neurogenesis</a> , <a href="#">Cellular Response to Molecule of Bacterial Origin</a> , <a href="#">Glycosaminoglycan Metabolic Process</a> , <a href="#">Regulation of Leukocyte Mediated Immunity</a> , <a href="#">Regulation of Muscle Cell Differentiation</a> , <a href="#">Positive Regulation of Immune Effector Process</a> , <a href="#">Cell-Cell Junction Organization</a> , <a href="#">Production of Molecular Mediator of Immune Response</a> , <a href="#">Ribonucleoside Biosynthetic Process</a> , <a href="#">Skeletal Muscle Fiber Development</a> , <a href="#">Regulation of Carbohydrate Metabolic Process</a> , <a href="#">Protein targeting to Nucleus</a> , <a href="#">Autophagy</a> , <a href="#">Cancer Immune Checkpoints</a> |
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## 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: | 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 |
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## Handling

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| Format: | Liquid |
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## Handling

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| 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



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