

## Product datasheet

# Recombinant human TGF beta 1 protein (Active) ab116150

[1 References](#) [2 Images](#)

### Description

---

|                                   |   |
|-----------------------------------|---|
| <b>Product name</b>               | Recombinant human TGF beta 1 protein (Active)   |
| <b>Biological activity</b>        | Method of determination: Inhibition of IL-4-induced HT-2 cell proliferation<br>Acceptance criteria: ED <sub>50</sub> ≤500 pg/mL (≥ 2.0 x 10 <sup>6</sup> units/mg)<br><br>The activity of Human TGF-beta is 2.2 x 10 <sup>4</sup> RU/μg, which was calibrated against recombinant human TGF-beta 1. |
| <b>Purity</b>                     | > 95 % SDS-PAGE.<br>Protein content and purity was determined by UV spectroscopy at 280 nm; RP-HPLC calibrated against a known standard and quantitation against a known standard via reducing and non-reducing SDS-PAGE gels.  |
| <b>Endotoxin level</b>            | < 1.000 Eu/μg   |
| <b>Expression system</b>          | CHO cells   |
| <b>Accession</b>                  | <b><u>P01137</u></b>  |
| <b>Protein length</b>             | Full length protein   |
| <b>Animal free</b>                | No  |
| <b>Nature</b>                     | Recombinant   |
| <b>Species</b>                    | Human   |
| <b>Sequence</b>                   | ALDTNYCFSS TEKNCCVRQL YIDFRKDLGW<br>KWIHEPKGYH ANFCLGPCPY IWSLDTQYSK<br>VLALYNQHNP GASAAPCCVP QALEPLPIVY<br>YVGRKPKVEQ LSNMIVRSCK CSALDTNYCF<br>SSTEKNCCVR QLYIDFRKDL GWKWIHEPKG<br>YHANFCLGPC PYWSLDTQY SKVLALYNQH<br>NPGASAAPCC VPQALEPLPI VYVGRKPKV<br>EQLSNMIVRS CKCS                           |
| <b>Predicted molecular weight</b> | 26 kDa  |
| <b>Amino acids</b>                | 279 to 390  |

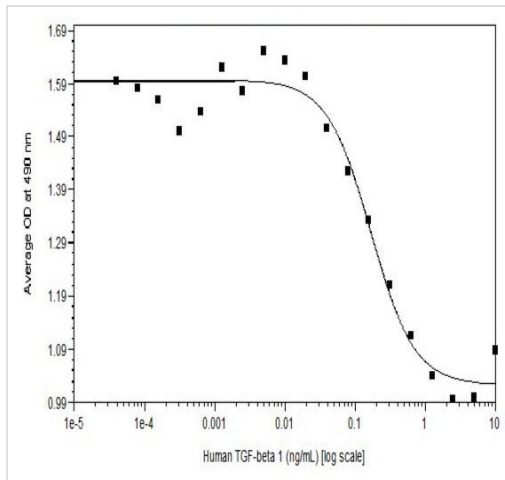
### Specifications

---

Our [Abpromise guarantee](#) covers the use of **ab116150** in the following tested applications.

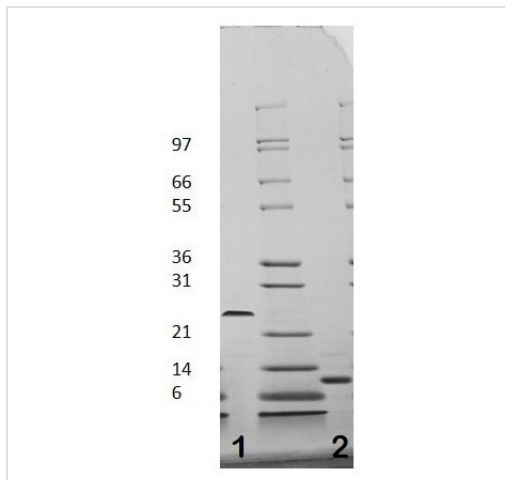
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

|   |   |
|---|---|
| <b>Applications</b>                     | HPLC<br>Functional Studies<br>SDS-PAGE  |
| <b>Form</b>                             | Lyophilized   |
| <b>Additional notes</b>                 | Endotoxin levels determined by LAL method.<br>For prolonged storage, dilute to working aliquots in a 0.1% BSA solution, store at -80°C and avoid repeat freeze thaws.   |
| <b>Preparation and Storage</b>          |   |
| <b>Stability and Storage</b>            | Shipped at Room Temperature. Store at -80°C. Avoid freeze / thaw cycle. For long term storage it is recommended to add a carrier protein on reconstitution (0.1% HSA or BSA).<br>Constituents: 0.1% Trifluoroacetic acid, 95% Trehalose<br><br>Lyophilized from a sterile (0.2 micron) filtered aqueous solution.<br>This product is an active protein and may elicit a biological response in vivo, handle with caution.   |
| <b>Reconstitution</b>                   | ab116150 should be reconstituted with sterile 10 mM HCl at a concentration of 0.1 mg/ml. When reconstituting the product, gently pipette and wash down the sides of the vial to ensure full recovery of the protein into solution. Centrifuge vial before opening. Suspend the product by gently pipetting the above recommended solution down the sides of the vial. DO NOT VORTEX. Allow several minutes for complete reconstitution.                                       |
| <b>General Info</b>                     |   |
| <b>Function</b>                         | 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 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.                                     |
| <b>Tissue specificity</b>               | Highly expressed in bone. Abundantly expressed in articular cartilage and chondrocytes and is increased in osteoarthritis (OA). Co-localizes with ASPN in chondrocytes within OA lesions of articular cartilage.  |
| <b>Involvement in disease</b>           | Defects in TGFB1 are the cause of Camurati-Engelmann disease (CE) [MIM:131300]; also known as progressive diaphyseal dysplasia 1 (DPD1). CE is an autosomal dominant disorder characterized by hyperostosis and sclerosis of the diaphyses of long bones. The disease typically presents in early childhood with pain, muscular weakness and waddling gait, and in some cases other features such as exophthalmos, facial paralysis, hearing difficulties and loss of vision. |
| <b>Sequence similarities</b>            | Belongs to the TGF-beta family.   |
| <b>Post-translational modifications</b> | Glycosylated.<br>The precursor is cleaved into mature TGF-beta-1 and LAP, which remains non-covalently linked to mature TGF-beta-1 rendering it inactive.   |
| <b>Cellular localization</b>            | Secreted > extracellular space > extracellular matrix.  |



ab116150 Inhibited HT-2 Proliferation.

Functional Studies - Recombinant human TGF beta 1 protein (Active) (ab116150)



1ug of ab116150 on 4-20% Tris-Glycine ge;, stained with Coomassie Blue.

Lane 1: Non-reduced

Lane 2: Reduced.

SDS-PAGE - Recombinant human TGF beta 1 protein (Active) (ab116150)

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

### Our Abpromise to you: Quality guaranteed and expert technical support

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise,

please visit <https://www.abcam.com/abpromise> or contact our technical team.

## **Terms and conditions**

---

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors