**Product name**
Anti-TGF beta 1 antibody [TB21] ab27969

**Description**
Mouse monoclonal [TB21] to TGF beta 1

**Host species**
Mouse

**Specificity**
This antibody recognises natural and recombinant TGF beta 1. It reacts with both dimeric and monomeric natural forms under reducing and non reducing conditions. Full length, inactive 44 kD TGFβ1 is cleaved into mature TGFβ1 (13 kD). TGFβ1 also homodimerizes and heterodimerizes with TGFβ2, so there is potential for multiple different band sizes in WB.

**Tested applications**
Suitable for: IHC-Fr, IHC-P, ELISA, ICC/IF, Neutralising, WB

**Species reactivity**
Reacts with: Sheep, Human, Pig

**Predicted to work with:** Rat

**Immunogen**
Human TGF Beta 1 from human platelets.

**Positive control**
Purchase matching WB positive control: Recombinant human TGF beta 1 protein (Active)

Human breast carcinoma.

**General notes**
We have mixed feedback from customers about the Rat specificity so the Rat species has been moved to predicted as we can't guarantee it. The antibody has been successfully used with Rat samples in publication PMID 22471627 and PMID 19820199 though.

This clone (TB21) demonstrates neutralising activity against TGF beta 1 in cell proliferation assays. Removal of sodium azide is recommended prior to use in functional assays.

**Properties**

<table>
<thead>
<tr>
<th>Form</th>
<th>Liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Storage buffer</td>
<td>Preservative: 0.09% Sodium azide</td>
</tr>
<tr>
<td>Purity</td>
<td>Immunogen affinity purified</td>
</tr>
<tr>
<td>Primary antibody notes</td>
<td>This clone (TB21) demonstrates neutralising activity against TGF beta 1 in cell proliferation</td>
</tr>
</tbody>
</table>
assays. Removal of sodium azide is recommended prior to use in functional assays.

**Clonality**
Monoclonal

**Clone number**
TB21

**Myeloma**
Sp2/0-Ag14

**Isotype**
IgG1

**Light chain type**
kappa

**Applications**

Our [Abpromise guarantee](#) covers the use of ab27969 in the following tested applications.

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

<table>
<thead>
<tr>
<th>Application</th>
<th>Abreviews</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>IHC-Fr</td>
<td></td>
<td>Use at an assay dependent concentration.</td>
</tr>
<tr>
<td>IHC-P</td>
<td></td>
<td>Use at an assay dependent concentration.</td>
</tr>
<tr>
<td>ELISA</td>
<td></td>
<td>Use at an assay dependent concentration.</td>
</tr>
<tr>
<td>ICC/IF</td>
<td></td>
<td>Use at an assay dependent concentration.</td>
</tr>
<tr>
<td>Neutralising</td>
<td></td>
<td>Use at an assay dependent concentration. PubMed: 8237223</td>
</tr>
</tbody>
</table>

**Target**

**Function**
Multifunctional protein that controls proliferation, differentiation and other functions in many cell types. Many cells synthesize TGFβ1 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.

**Tissue specificity**
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.

**Involvement in disease**
Defects in TGFβ1 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.

**Sequence similarities**
Belongs to the TGF-beta family.

**Post-translational modifications**
Glycosylated.

The precursor is cleaved into mature TGF-beta-1 and LAP, which remains non-covalently linked to

---

2
mature TGF-beta-1 rendering it inactive.

**Cellular localization**

Secreted > extracellular space > extracellular matrix.

**Images**

ab27969 staining TGF beta 1 in rat kidney tissue sections by Immunohistochemistry (frozen sections). Tissue was fixed with acetone and then blocked with 2% BSA for 2 hours at 25°C followed by incubation with the primary antibody, at a 1/200 dilution, for 9 hours at 4°C. The secondary antibody used was a goat anti-mouse IgG conjugated to Alexa Fluor® 594 (red) used at a 1/500 dilution.

ab 27969 staining TGF beta 1 in human 293ft cells by Immunocytochemistry/Immunofluorescence. The 293 FT cells were cultured for 3 days then fixed with 3.7% formaldehyde for 10 minutes and blocked with 5% BSA in PBS for 1 hour at +4°C. The cells were incubated with the primary antibody at 1/200 dilution overnight at +4°C. The secondary antibody (green) was Alexa Fluor® 555 Goat anti-Rabbit IgG used at a dilution of 1/200.
ab27969 staining TGF beta 1 in Human ureter tissue sections by Immunohistochemistry (IHC-Fr - frozen sections). Tissue was fixed with paraformaldehyde and blocked with 1% serum for 30 minutes at 20°C. Samples were incubated with primary antibody (1/150) for 16 hours at 4°C. A Cy2®-conjugated Goat anti-mouse polyclonal (1/200) was used as the secondary antibody.

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