

Product datasheet

Anti-TGF beta 1 antibody [EPR18163] ab179695

KO VALIDATED Recombinant RabMAb

★★★★★ 2 Abreviews 22 References 6 Images

Overview

Product name	Anti-TGF beta 1 antibody [EPR18163]
Description	Rabbit monoclonal [EPR18163] to TGF beta 1
Host species	Rabbit
Specificity	ab179695 recognizes the mature and cleaved forms of TGF-beta 1.
Tested applications	Suitable for: WB
Species reactivity	Reacts with: Mouse, Rat, Human
Immunogen	Recombinant fragment within Mouse TGF beta 1 aa 250 to the C-terminus. The exact sequence is proprietary. Database link: P04202
Positive control	WB: L-929, RAW 264.7, HeLa, A549 and K562 whole cell lysates; Mouse serum; Mouse spleen lysate; Rat kidney and spleen lysates; Rat serum; Human kidney and spleen lysates; Recombinant protein fragment human TGF beta 1.

General notes

This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free production

For more information [see here](#).

Our RabMAb[®] technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to [RabMAb[®] patents](#).

Reproducibility is key to advancing scientific discovery and accelerating scientists' next breakthrough.

Abcam is leading the way with our range of recombinant antibodies, knockout-validated antibodies and knockout cell lines, all of which support improved reproducibility.

We are also planning to innovate the way in which we present recommended applications and species on our product datasheets, so that only applications & species that have been tested in our own labs, our suppliers or by selected trusted collaborators are covered by our Abpromise[™] guarantee.

In preparation for this, we have started to update the applications & species that this product is Abpromise guaranteed for.

We are also updating the applications & species that this product has been “predicted to work with,” however this information is not covered by our Abpromise guarantee.

Applications & species from publications and Abreviews that have not been tested in our own labs or in those of our suppliers are not covered by the Abpromise guarantee.

Please check that this product meets your needs before purchasing. If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, as well as customer reviews and Q&As.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
Storage buffer	Preservative: 0.01% Sodium azide Constituents: 59% PBS, 40% Glycerol, 0.05% BSA
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR18163
Isotype	IgG

Applications

Our [Abpromise guarantee](#) covers the use of **ab179695** in the following tested applications.

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

Application	Abreviews	Notes
WB	★★★★★	1/1000. Detects a band of approximately 50, 12.5 kDa (predicted molecular weight: 44 kDa).

Target

Function	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.
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 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.

Sequence similarities

Belongs to the TGF-beta family.

Post-translational modifications

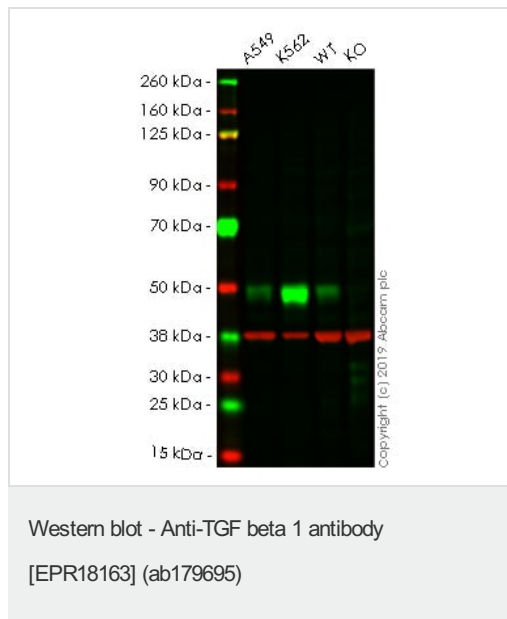
Glycosylated.

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

Cellular localization

Secreted > extracellular space > extracellular matrix.

Images



All lanes : Anti-TGF beta 1 antibody [EPR18163] (ab179695) at 1/1000 dilution

Lane 1 : A549 cell lysate

Lane 2 : K562 cell lysate

Lane 3 : Wild-type HeLa cell lysate

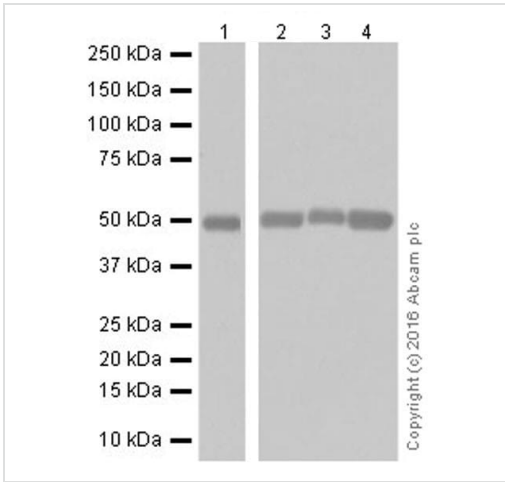
Lane 4 : TGF beta 1 knockout HeLa cell lysate

Lysates/proteins at 20 µg per lane.

Predicted band size: 44 kDa

Lanes 1 - 4: Merged signal (red and green). Green - ab179695 observed at 50 kDa. Red - loading control, [ab8245](#) observed at 37 kDa.

ab179695 was shown to react with TGF beta 1 in wild-type HeLa cells. Loss of signal was observed when knockout cell line [ab255439](#) (knockout cell lysate [ab263799](#)) was used. Wild-type and TGF beta 1 knockout samples were subjected to SDS-PAGE. ab179695 and Anti-GAPDH antibody [6C5] - Loading Control ([ab8245](#)) were incubated overnight at 4°C at 1 in 1000 dilution and 1 in 20000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preadsorbed ([ab216773](#)) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preadsorbed ([ab216776](#)) secondary antibodies at 1 in 20000 dilution for 1 hour at room temperature before imaging.



Western blot - Anti-TGF beta 1 antibody [EPR18163] (ab179695)

All lanes : Anti-TGF beta 1 antibody [EPR18163] (ab179695) at 1/5000 dilution

Lane 1 : L-929 (Mouse connective tissue fibroblast cell line) whole cell lysate

Lane 2 : RAW 264.7 (Mouse macrophage cell line transformed with Abelson murine leukemia virus) whole cell lysate

Lane 3 : A549 (Human lung carcinoma cell line) whole cell lysate

Lane 4 : K562 (Human chronic myelogenous leukemia cell line from bone marrow) whole cell lysate

Lysates/proteins at 10 µg per lane.

Secondary

All lanes : Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

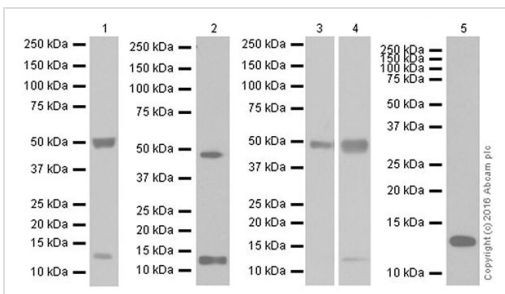
Predicted band size: 44 kDa

Observed band size: 50 kDa

[why is the actual band size different from the predicted?](#)

Blocking/Dilution buffer: 5% NFDm/TBST.

Exposure time: Lane 1: 3 minutes; Lane 2-4:30 seconds.



Western blot - Anti-TGF beta 1 antibody [EPR18163] (ab179695)

Lane 1 : Anti-TGF beta 1 antibody [EPR18163] (ab179695) at 1/5000 dilution

Lanes 2-5 : Anti-TGF beta 1 antibody [EPR18163] (ab179695) at 1/1000 dilution

Lane 1 : Mouse serum

Lane 2 : Mouse spleen lysate

Lane 3 : Rat kidney lysate

Lane 4 : Rat spleen lysate

Lane 5 : Rat serum

Lysates/proteins at 10 µg per lane.

Secondary

All lanes : Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

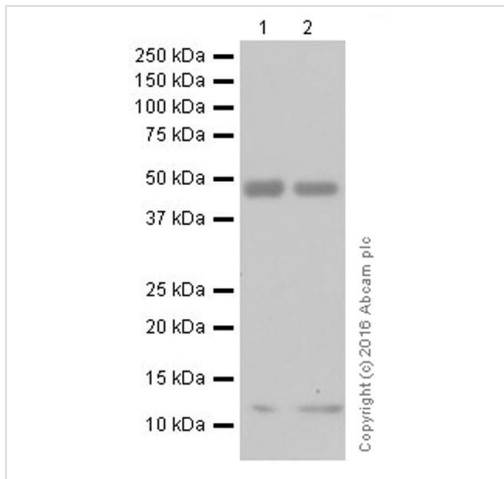
Predicted band size: 44 kDa

Observed band size: 12.5,50 kDa [why is the actual band size different from the predicted?](#)

Blocking/Dilution buffer: 5% NFDm/TBST.

Exposure time: Lane 1/2/3/5: 3minutes; Lane 4: 30 seconds.

The expression profile observed is consistent with what has been described in the literature (PMID:18390240; PMID:12717387; PMID:2139036).



Western blot - Anti-TGF beta 1 antibody [EPR18163] (ab179695)

All lanes : Anti-TGF beta 1 antibody [EPR18163] (ab179695) at 1/1000 dilution

Lane 1 : Human kidney lysate

Lane 2 : Human spleen lysate

Lysates/proteins at 10 µg per lane.

Secondary

All lanes : Goat Anti-Rabbit IgG Peroxidase Conjugate, specific to the non-reduced form of IgG at 1/100000 dilution

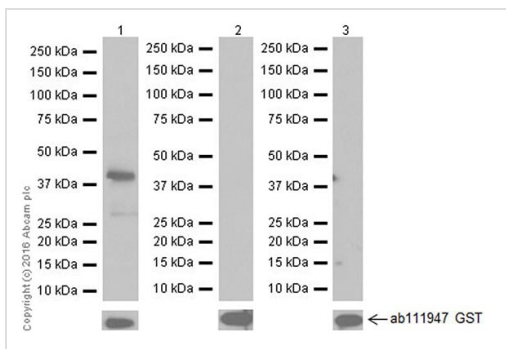
Predicted band size: 44 kDa

Observed band size: 12.5,50 kDa [why is the actual band size different from the predicted?](#)

Exposure time: 3 minutes

Blocking/Dilution buffer: 5% NFDm/TBST.

The expression profile observed is consistent with what has been described in the literature (PMID:18390240; PMID:12717387; PMID:2139036).



Western blot - Anti-TGF beta 1 antibody
[EPR18163] (ab179695)

All lanes : Anti-TGF beta 1 antibody [EPR18163] (ab179695) at 1/1000 dilution

Lane 1 : Recombinant protein fragment human TGF beta 1

Lane 2 : Recombinant protein fragment human TGF beta 2

Lane 3 : Recombinant protein fragment human TGF beta 3

Lysates/proteins at 0.01 µg per lane.

Secondary

All lanes : Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution





Predicted band size: 44 kDa

Blocking/Dilution buffer: 5% NFD/MTBST.

Exposure time: Lane 1: 1 second; Lane 2/3: 3 minutes.

Recombinant protein fragment human TGF beta 1 contains aa279-390 with a GST-tag. Recombinant protein fragment human TGF beta 2 contains aa303-414 with a GST-tag Recombinant protein fragment human TGF beta 3 contains aa301-412 with a GST-tag. These three fragment recombinant proteins were made in-house.

Why choose a recombinant antibody?

 Research with confidence Consistent and reproducible results	 Long-term and scalable supply Recombinant technology
 Success from the first experiment Confirmed specificity	 Ethical standards compliant Animal-free production

Anti-TGF beta 1 antibody [EPR18163] (ab179695)

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

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