

# Anti-TGF beta 1 Antibody [PD00-17]

HA721143



<b>Product Type:</b>	Recombinant Rabbit monoclonal IgG, primary antibodies
<b>Species reactivity:</b>	Human, Mouse, Rat, Monkey
<b>Applications:</b>	WB, IHC-P, IF-Tissue
<b>Molecular Wt:</b>	Predicted band size: 44 kDa
<b>Clone number:</b>	PD00-17

**Description:** Transforming growth factor beta 1 or TGF- $\beta$ 1 is a polypeptide member of the transforming growth factor beta superfamily of cytokines. It is a secreted protein that performs many cellular functions, including the control of cell growth, cell proliferation, cell differentiation, and apoptosis. In humans, TGF- $\beta$ 1 is encoded by the TGFB1 gene. TGF- $\beta$  is a multifunctional set of peptides that controls proliferation, differentiation, and other functions in many cell types. TGF- $\beta$  acts synergistically with transforming growth factor-alpha (TGF- $\alpha$ ) in inducing transformation. It also acts as a negative autocrine growth factor. Dysregulation of TGF- $\beta$  activation and signaling may result in apoptosis. Many cells synthesize TGF- $\beta$  and almost all of them have specific receptors for this peptide. TGF- $\beta$ 1, TGF- $\beta$ 2, and TGF- $\beta$ 3 all function through the same receptor signaling systems. TGF- $\beta$ 1 was first identified in human platelets as a protein with a molecular mass of 25 kilodaltons with a potential role in wound healing. It was later characterized as a large protein precursor (containing 390 amino acids) that was proteolytically processed to produce a mature peptide of 112 amino acids. TGF- $\beta$ 1 plays an important role in controlling the immune system, and shows different activities on different types of cell, or cells at different developmental stages. Most immune cells (or leukocytes) secrete TGF- $\beta$ 1.

**Immunogen:** Synthetic peptide (KLH-coupled) corresponding to Human TGF-Beta 1 C-terminal.

**Positive control:** K-562 cell lysate, Raji cell lysate, Saos-2 cell lysate, 786-0 cell lysate, COS-1 cell lysate, NIH/3T3 cell lysate, RAW264.7 cell lysate, L-929 cell lysate, C6 cell lysate, Mouse spleen tissue lysate, Rat spleen tissue lysate, rat spleen tissue, mouse spleen tissue.

**Subcellular location:** Extracellular matrix, Secreted.

**Database links:** SwissProt: P01137 Human | P04202 Mouse | P17246 Rat

**Recommended Dilutions:**

<b>WB</b>	1:2,000-1:5,000
<b>IHC-P</b>	1:200
<b>IF-Tissue</b>	1:200

**Storage Buffer:** PBS (pH7.4), 0.1% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.

**Storage Instruction:** Shipped at 4°C. Store at +4°C short term (1-2 weeks). It is recommended to aliquot into single-use upon delivery. Store at -20°C long term.

**Purity:** Protein A affinity purified.

Hangzhou Huaan Biotechnology Co., Ltd.

Orders: 0086-571-88062880

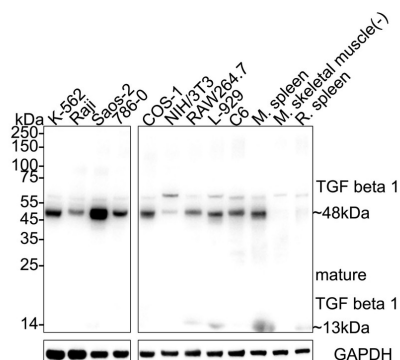
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Applications: WB=Western blot IHC-P=Immunohistochemistry (paraffin) IF-Cell=Immunofluorescence (Cell) IF-Tissue=Immunofluorescence (Tissue) FC=Flow cytometry IP=Immunoprecipitation

## Images



**Fig1:** Western blot analysis of TGF beta 1 on different lysates with Rabbit anti-TGF beta 1 antibody (HA721143) at 1/5,000 dilution.

Lane 1: K-562 cell lysate  
 Lane 2: Raji cell lysate  
 Lane 3: Saos-2 cell lysate  
 Lane 4: 786-0 cell lysate  
 Lane 5: COS-1 cell lysate  
 Lane 6: NIH/3T3 cell lysate  
 Lane 7: RAW264.7 cell lysate  
 Lane 8: L-929 cell lysate  
 Lane 9: C6 cell lysate  
 Lane 10: Mouse spleen tissue lysate  
 Lane 11: Mouse skeletal muscle tissue lysate (negative)  
 Lane 12: Rat spleen tissue lysate

Lysates/proteins at 20 µg/Lane.

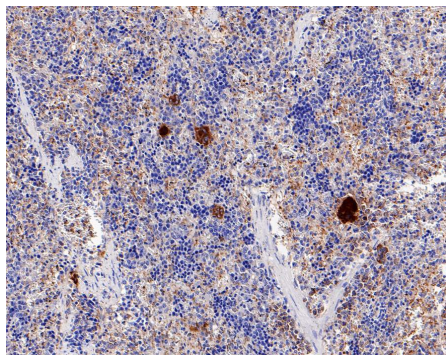
Predicted band size: 44 kDa

Observed band size: 48/13 kDa

Exposure time: 10 seconds; ECL: K1801;

4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDm/TBST for 1 hour at room temperature. The primary antibody (HA721143) at 1/5,000 dilution was used in primary antibody dilution (K1803) at 4°C overnight. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1/50,000 dilution was used for 1 hour at room temperature.



**Fig2:** Immunohistochemical analysis of paraffin-embedded rat spleen tissue with Rabbit anti-TGF beta 1 antibody (HA721143) at 1/200 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH<sub>2</sub>O and PBS, and then probed with the primary antibody (HA721143) at 1/200 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

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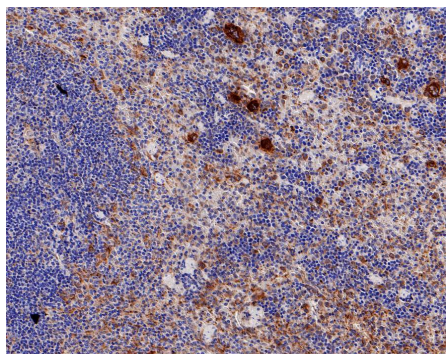
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**Fig3:** Immunohistochemical analysis of paraffin-embedded mouse spleen tissue with Rabbit anti-TGF beta 1 antibody (HA721143) at 1/200 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH<sub>2</sub>O and PBS, and then probed with the primary antibody (HA721143) at 1/200 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

**Note:** All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".

### Background References

1. Takahara T. et. al. TGFB1 mRNA expression is associated with poor prognosis and specific features of inflammation in ccRCC. Virchows Arch. 2022 Feb
2. Abdel Mouti M. et. al. TGFB1/INHBA Homodimer/Nodal-SMAD2/3 Signaling Network: A Pivotal Molecular Target in PDAC Treatment. Mol Ther. 2021 Mar

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