

Anti-TGF beta 1 Antibody [PD00-17]

HA721143



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

Description: Transforming growth factor beta 1 or TGF- β 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- β 1 is encoded by the TGFB1 gene. TGF- β is a multifunctional set of peptides that controls proliferation, differentiation, and other functions in many cell types. TGF- β acts synergistically with transforming growth factor-alpha (TGF- α) in inducing transformation. It also acts as a negative autocrine growth factor. Dysregulation of TGF- β activation and signaling may result in apoptosis. Many cells synthesize TGF- β and almost all of them have specific receptors for this peptide. TGF- β 1, TGF- β 2, and TGF- β 3 all function through the same receptor signaling systems. TGF- β 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- β 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- β 1.

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

Positive control: Raji cell lysate, K-562 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:

WB	1:2,000
IHC-P	1:200
IF-Tissue	1:200

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

Storage Instruction: Store at +4°C after thawing. Aliquot store at -20°C. Avoid repeated freeze / thaw cycles.

Purity: Protein A affinity purified.

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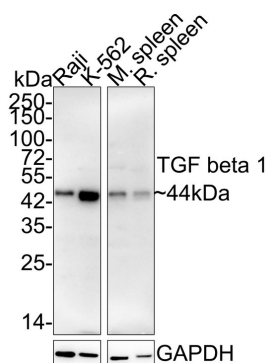


Fig1: Western blot analysis of TGF beta 1 on different lysates with Rabbit anti-TGF beta 1 antibody (HA721143) at 1/2,000 dilution.

Lane 1: Raji cell lysate (15 µg/Lane)

Lane 2: K-562 cell lysate (15 µg/Lane)

Lane 3: Mouse spleen tissue lysate (20 µg/Lane)

Lane 4: Rat spleen tissue lysate (20 µg/Lane)

Predicted band size: 44 kDa

Observed band size: 44 kDa

Exposure time: 3 minutes 54 seconds;

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 1/2,000 dilution was used in 5% NFDm/TBST 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.

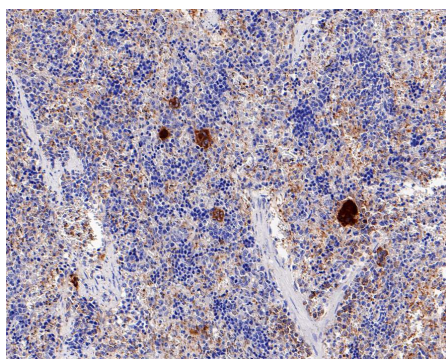


Fig2: Immunohistochemical analysis of paraffin-embedded rat spleen tissue with Rabbit anti-TGF beta 1 antibody (HA721143) at 1/200 dilution.

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 ddH₂O 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.

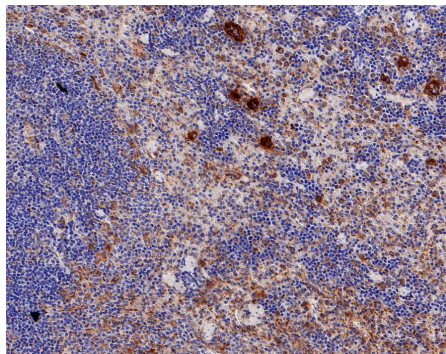


Fig3: Immunohistochemical analysis of paraffin-embedded mouse spleen tissue with Rabbit anti-TGF beta 1 antibody (HA721143) at 1/200 dilution.

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 ddH₂O 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. TGF β 1 mRNA expression is associated with poor prognosis and specific features of inflammation in ccRCC. *Virchows Arch.* 2022 Feb
2. Abdel Mouti M. et al. TGF β 1/INHBA Homodimer/Nodal-SMAD2/3 Signaling Network: A Pivotal Molecular Target in PDAC Treatment. *Mol Ther.* 2021 Mar

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