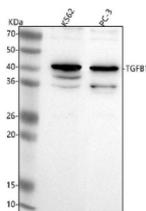


## TGFB1 Antibody / Transforming growth factor beta-1 (FY12384)

Catalog No.	Formulation	Size
FY12384	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

[Bulk quote request](#)

<b>Availability</b>	1-2 days
<b>Species Reactivity</b>	Human
<b>Format</b>	Lyophilized
<b>Host</b>	Rabbit
<b>Clonality</b>	Polyclonal (rabbit origin)
<b>Isotype</b>	Rabbit IgG
<b>Purity</b>	Immunogen affinity purified
<b>Buffer</b>	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na <sub>2</sub> HPO <sub>4</sub> .
<b>UniProt</b>	P01137
<b>Applications</b>	Western Blot : 0.25-0.5ug/ml ELISA : 0.1-0.5ug/ml
<b>Limitations</b>	This TGFB1 antibody is available for research use only.



Western blot analysis of TGFB1 using anti-TGFB1 antibody. Lane 1: human K562 whole cell lysates, Lane 2: human PC-3 whole cell lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-TGFB1 antibody at 0.5 ug/ml overnight at 4oC, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal was developed using enhanced chemiluminescent. TGFB1 (~44 kDa predicted precursor) was detected as bands at ~40, ~38, and ~35 kDa, consistent with the known processing of pro-TGFB1 into partially cleaved and mature latent forms.

### Description

The TGFB1 antibody targets Transforming growth factor beta-1, a multifunctional cytokine encoded by the TGFB1 gene that regulates cell growth, differentiation, immune response, and extracellular matrix production. As a member of the TGF-beta superfamily, this secreted protein plays pivotal roles in development, tissue repair, and immune regulation. Transforming growth factor beta-1 is synthesized as a latent precursor that undergoes proteolytic activation to yield the

mature cytokine. The TGFB1 antibody provides researchers with a reliable reagent to study this crucial signaling molecule and its diverse biological effects.

Transforming growth factor beta-1 binds to type I and type II TGF-beta receptors, initiating phosphorylation of SMAD transcription factors that regulate gene expression. This signaling pathway influences processes such as epithelial-to-mesenchymal transition (EMT), fibrosis, angiogenesis, and immune tolerance. The TGFB1 antibody enables quantification of protein levels and distribution in tissues, helping elucidate how this cytokine coordinates cellular communication during development and wound healing.

Dysregulated TGF-beta1 signaling contributes to numerous diseases, including cancer, pulmonary fibrosis, liver cirrhosis, and autoimmune disorders. Overproduction drives fibrotic remodeling through excessive extracellular matrix deposition, while loss of function can impair immune suppression and tissue homeostasis. The TGFB1 antibody is a critical tool for analyzing these disease mechanisms, allowing assessment of active and latent forms of the cytokine. It is widely used in immunohistochemical detection of TGF-beta1 expression in fibrotic lesions, tumors, and inflamed tissues.

In cancer, Transforming growth factor beta-1 exhibits dual roles—acting as a tumor suppressor in early stages and a tumor promoter in advanced disease. It enhances epithelial cell migration and invasion by inducing EMT and modifying the tumor microenvironment. The TGFB1 antibody allows researchers to explore these context-dependent effects, providing insight into how TGF-beta1 transitions from growth inhibitory to pro-metastatic functions. In immunology, this cytokine maintains peripheral tolerance by inducing regulatory T cells and suppressing inflammatory responses.

The TGFB1 antibody performs effectively in western blotting, ELISA, and immunohistochemistry. It provides robust detection of both precursor and mature forms of Transforming growth factor beta-1. NSJ Bioreagents supplies this antibody with validated specificity for research in fibrosis, oncology, and immunoregulation. By supporting detailed examination of TGF-beta signaling and cytokine activity, the TGFB1 antibody enables discovery in molecular pathways that link development, immune balance, and tissue remodeling.

## Application Notes

Optimal dilution of the TGFB1 antibody should be determined by the researcher.

## Immunogen

E.coli-derived human TGF Beta 1/TGFB1 recombinant protein (Position: A279-H347) was used as the immunogen for the TGFB1 antibody.

## Storage

After reconstitution, the TGFB1 antibody can be stored for up to one month at 4°C. For long-term, aliquot and store at -20°C. Avoid repeated freezing and thawing.