



## Mouse Anti-Human TGF- $\beta$ Monoclonal Antibody Datasheet

**Product Name:** mAb anti-Human TGF- $\beta$

**Clone No.:** 2C5

**Catalogue No.:** MO-C40009B

**Quantity:** 0.5 mg/vial

**Description:** Mouse monoclonal antibody to human Transforming Growth Factor beta (TGF- $\beta$ )

**Purification:** Protein G affinity purified

**Product Type:** Primary antibody

**Target Protein:** Human TGF- $\beta$

**Immunogen:** TGF- $\beta$  from human platelets

**Fusion Myeloma:** Sp2/0-Ag14

**Specificity:** Western blotting demonstrated that this antibody reacts with the dimeric (25 kDa) and monomeric (12.5 kDa.) forms of TGF- $\beta$  under both non-reducing and reducing conditions respectively. This antibody recognizes both human platelet-derived and recombinant TGF- $\beta$  in ELISA.

**Species Reactivity:** Human, others not tested

**Host / Isotype:** Mouse, IgG1 Kappa

**Formulation:** Lyophilized in 0.01M PBS, pH 7.0.

**Reconstitution:** Double distilled water is recommended and to adjust the final concentration to 1.00mg/mL.

**Storage:** Store at -20°C

**Research Area:** Growth Factors and Their Receptors, Angiogenesis

**Background:** Transforming growth factor beta (TGF- $\beta$ ) has three isoforms (TGF- $\beta$ 1, TGF- $\beta$ 2, and

TGF- $\beta$ 3) with similar functions.

The cytokine is a homodimer linked by disulfide bond. Inside cells, the cytokine forms a small latent complex with latent associated peptide (LAP). This small complex binds to latent TGF- $\beta$  binding protein (LTBP) to be secreted to extra-cellular matrix. Disassociation of the latent proteins from TGF- $\beta$  results in the release of the cytokine to its receptor. The process is called activation, which can be influenced by various factors, including proteases, metalloproteases, extreme pH, mild acidic condition, reactive oxygen species and integrins.

TGF- $\beta$  is an anti-proliferation factor in normal cells. It increases the synthesis of p15 and p21, which can block the cyclin: CDK complex, and causes cells to stop at G1 phase. The cytokine can induce apoptosis through both SMAD and DAXX pathways. In cancer cells, TGF- $\beta$  signaling is altered and TGF- $\beta$  no longer stops cell proliferation.

### Applications:

**Indirect ELISA:** The antibody reacts with human platelet derived TGF-beta.

**Western Blot:** The image below shows that 5ng/lane of human platelet derived TGF-beta was detected by anti-TGF-beta mAb clone 2C5 on Western Blot. The blot was blocked with 1%BSA 5% sucrose in PBS overnight after electrical transfer. Clone 2C5 was diluted to 1 $\mu$ g/ml with PBS-T and incubated with blot for 2 hours. The blot

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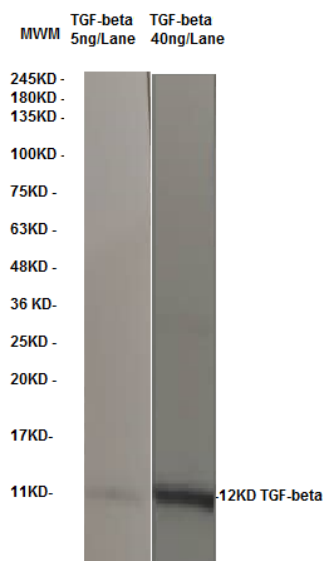
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was washed 5 times with PBS-T and incubated with a 1:1000 diluted anti-mouse IgG HRP conjugate for 1 hour. HRP substrate 4-Chloro-1-naphthol and H<sub>2</sub>O<sub>2</sub> was used to stain the blot directly.



### References:

If research is published using this product, please inform Anogen in order to cite the reference on this datasheet. Anogen will provide one unit of product in the same category as gratitude.

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