# Mouse TGF-β2 Antibody

Monoclonal Rat $IgG_{2B}$ Clone # 771213

Catalog Number: MAB7346

## DESCRIPTION

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| **Species Reactivity** | Mouse |
| **Specificity** | Detects mouse TGF-β2 in direct ELISAs. In direct ELISAs, approximately 50% cross-reactivity with recombinant human (rh) TGF-beta 2 and rhTGF-beta 3 is observed. |
| **Source** | Monoclonal Rat $IgG_{2B}$ Clone # 771213 |
| **Purification** | Protein A or G purified from hybridoma culture supernatant |
| **Immunogen** | Chinese hamster ovary cell line CHO-derived recombinant mouse TGF−β2<br>Ala303-Ser414<br>Accession # P27090 |
| **Endotoxin Level** | <0.10 EU per 1 µg of the antibody by the LAL method. |
| **Formulation** | Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.<br>*Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS. |

## APPLICATIONS

**Please Note:** *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

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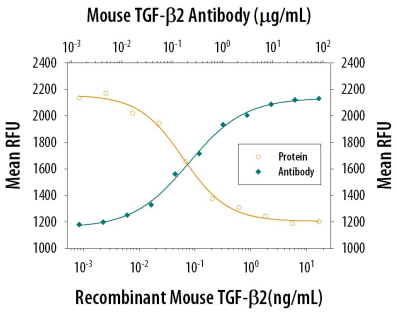
| **Neutralization** | Measured by its ability to neutralize TGF−β2 inhibition of IL-4-dependent proliferation in the HT−2 mouse T cell line. Tsang, M. *et al*. (1995) Cytokine **7**:389. The Neutralization Dose ($ND_{50}$) is typically 0.15-0.75 ug/mL in the presence of 5 ng/mL Recombinant Mouse TGF−β2 and 7.5 ng/mL Recombinant Mouse IL-4. |

## DATA

**Neutralization**




**TGF-β2 Inhibition of IL-4-dependent Cell Proliferation and Neutralization by Mouse TGF-β2 Antibody.** Recombinant Mouse TGF-β2 (Catalog # 7346-B2) inhibits Recombinant Mouse IL-4 (Catalog # 404-ML) induced proliferation in the HT-2 mouse T cell line in a dose-dependent manner (orange line). Inhibition of Recombinant Mouse IL-4 (7.5 ng/mL) activity elicited by Recombinant Mouse TGF-β2 (5 ng/mL) is neutralized (green line) by increasing concentrations of Rat Anti-Mouse TGF-β2 Monoclonal Antibody (Catalog # MAB7346). The $ND_{50}$ is typically 0.15-0.75 ug/mL.

## PREPARATION AND STORAGE

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| **Reconstitution** | Sterile PBS to a final concentration of 0.5 mg/mL. |
| **Shipping** | The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.<br>*Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C |
| **Stability & Storage** | **Use a manual defrost freezer and avoid repeated freeze-thaw cycles.**<br>● 12 months from date of receipt, -20 to -70 °C as supplied.<br>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.<br>● 6 months, -20 to -70 °C under sterile conditions after reconstitution. |

## BACKGROUND

TGF-β2 (transforming growth factor beta 2) is one of three closely related mammalian members of the large TGF-β superfamily that share a characteristic cysteine knot structure. TGF-β1, -2 and -3 are highly pleiotropic cytokines proposed to act as cellular switches that regulate processes such as immune function, proliferation and epithelial-mesenchymal transition. Each TGF-β isoform has some non-redundant functions; for TGF-β2, mice with targeted deletion show defects in development of cardiac, lung, craniofacial, limb, eye, ear and urogenital systems. Mouse TGF-β2 cDNA encodes a 414 amino acid (aa) precursor that contains a 19 aa signal peptide and a 395 aa proprotein. A furin-like convertase processes the proprotein to generate an N-terminal 283 aa latency-associated peptide (LAP) and a C-terminal 112 aa mature TGF- β2. Disulfide-linked homodimers of LAP and TGF-β2 remain non-covalently associated after secretion, forming the small latent TGF-β2 complex. Covalent linkage of LAP to one of three latent TGF-β binding proteins (LTBPs) creates a large latent complex that may interact with the extracellular matrix. TGF-β is activated from latency by pathways that include actions of the protease plasmin, matrix metalloproteases, thrombospondin 1 and a subset of integrins. Mature mouse TGF-β2 shares 100% aa identity with rat TGF-β2, and 97% aa identity with human, porcine, canine, equine and bovine TGF-β2. It demonstrates cross-species activity. In most cells, TGF-β2 signaling begins with binding to a complex of the accessory receptor betaglycan (also known as TGF-β RIII) and a type II ser/thr kinase receptor termed TGF-β RII, which then phosphorylates and activates another ser/thr kinase receptor, TGF-β RI (also called activin receptor-like kinase (ALK) -5), or alternatively, ALK-1. The whole complex phosphorylates and activates Smad proteins that regulate transcription. In bone -related cells, however, TGF-β2 also signals through TGF-β RIIB (a splice variant of TGF-β RII), independently of TGF-β RIII. Use of other signaling pathways that are Smad-independent allows for disparate actions observed in response to TGF-β in different contexts.