

ARG10002 anti-TGF beta antibody [TB21]

Package: 100 µg, 50 µg
Store at: -20°C

Summary

Product Description	Mouse Monoclonal antibody [TB21] recognizes TGF beta
Tested Reactivity	Hu, Ms, Rat, Rb, Sheep
Predict Reactivity	Cow, Mink, Pig
Tested Application	ELISA, ICC/IF, IHC-Fr, IHC-P, Neut, WB
Host	Mouse
Clonality	Monoclonal
Clone	TB21
Isotype	IgG1, kappa
Target Name	TGF beta
Species	Human
Species	☐☐☐
Immunogen	TGF-β from human platelets
Conjugation	Un-conjugated
Alternate Names	TGFB; DPD1; TGFbeta; CED; Transforming growth factor beta-1; LAP; TGF-beta-1

Application Instructions

Application table	Application	Dilution
	ELISA	Assay-dependent
	ICC/IF	Assay-dependent
	IHC-Fr	Assay-dependent
	IHC-P	1:1000
	Neut	Assay-dependent
	WB	1 - 2 µg/ml

Application Note
Neutralizing: This antibody neutralizes TGF-β activity in vitro and in vivo. In an inhibition assay of CCL/64 cell growth and in a NRK-49F colony forming assay, the antibody neutralized TGF-β bioactivities. The effect of micro-injection of this antibody into one blastomere of two cell stage Xenopus embryos indicated that it was also able to neutralize the bioactivity of TGF-β in vivo.

IHC: This antibody has been used to demonstrate TGF-β in ovine ovarian tissue and human breast carcinoma at a dilution of 1:1000. As a consequence of the intense staining of the erythrocytes, it is possible to locate a single cell within the ovarian stroma, making it useful in locating very fine capillary networks within tissue.

Western Blot: This antibody when used at concentration of 5-20 ng/mL will allow visualization of 100 ng/lane of TGF-beta.

* The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.

Properties

Form	Liquid
Purification	Protein G affinity purified
Buffer	0.01M PBS (pH 7.0)
Concentration	1 mg/ml
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C or below. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.
Note	For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

Gene Symbol	TGFB1
Gene Full Name	transforming growth factor, beta 1
Background	This gene encodes a member of the transforming growth factor beta (TGFB) family of cytokines, which are multifunctional peptides that regulate proliferation, differentiation, adhesion, migration, and other functions in many cell types. Many cells have TGFB receptors, and the protein positively and negatively regulates many other growth factors. The secreted protein is cleaved into a latency-associated peptide (LAP) and a mature TGFB1 peptide, and is found in either a latent form composed of a TGFB1 homodimer, a LAP homodimer, and a latent TGFB1-binding protein, or in an active form composed of a TGFB1 homodimer. The mature peptide may also form heterodimers with other TGFB family members. This gene is frequently upregulated in tumor cells, and mutations in this gene result in Camurati-Engelmann disease.[provided by RefSeq, Oct 2009]
Function	Multifunctional protein that controls proliferation, differentiation and other functions in many cell types. Many cells synthesize TGFB1 and have specific receptors for it. It positively and negatively regulates many other growth factors. It plays an important role in bone remodeling as it is a potent stimulator of osteoblastic bone formation, causing chemotaxis, proliferation and differentiation in committed osteoblasts. Can promote either T-helper 17 cells (Th17) or regulatory T-cells (Treg) lineage differentiation in a concentration-dependent manner. At high concentrations, leads to FOXP3-mediated suppression of RORC and down-regulation of IL-17 expression, favoring Treg cell development. At low concentrations in concert with IL-6 and IL-21, leads to expression of the IL-17 and IL-23 receptors, favoring differentiation to Th17 cells. [UniProt]
Research Area	Cancer antibody; Cell Biology and Cellular Response antibody; Developmental Biology antibody; Metabolism antibody; Signaling Transduction antibody
Calculated Mw	44 kDa
PTM	Glycosylated. The precursor is cleaved into mature TGF-beta-1 and LAP, which remains non-covalently linked to mature TGF-beta-1 rendering it inactive.