Mouse TGF-β2 Alexa Fluor® 350-conjugated Antibody

Monoclonal Rat IgG_{2B} Clone # 771213

Catalog Number: FAB7346U

100 µg

DESCRIPTION

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 Ala303-Ser414 Accession # P27090
Conjugate	Alexa Fluor 350 Excitation Wavelength: 346 nm Emission Wavelength: 442 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

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.*

Neutralization	Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

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.

PRODUCT SPECIFIC NOTICES

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