



Anti-TGFB2 polyclonal antibody [Biotin] (DPABY-416)

This product is for research use only and is not intended for diagnostic use.

PRODUCT INFORMATION

Antigen Description

Transforming Growth Factor Beta 1, 2, and 3 (TGF-beta 1, TGF-beta 2, and TGF-beta 3) are highly pleiotropic cytokines that virtually all cell types secrete. TGF-beta molecules are proposed to act as cellular switches that regulate processes such as immune function, proliferation, and epithelial-mesenchymal transition. Targeted deletions of these genes in mice show that each TGF-beta isoform has some non-redundant functions: TGF-beta 1 is involved in hematopoiesis and endothelial differentiation; TGF-beta 2 affects development of cardiac, lung, craniofacial, limb, eye, ear, and urogenital systems; and TGF-beta 3 influences palatogenesis and pulmonary development. The full range of in vitro biological activities of TGF-beta 5 has not yet been explored. However, TGF-beta 1, TGF-beta 2, TGF-beta 3, and TGF-beta 5 have been found to be largely interchangeable in an inhibitory bioassay, and it is anticipated that TGF-beta 5 will show a spectrum of activities similar to the other TGF-beta family members. To date, the production of TGF-beta 5 has only been demonstrated in *Xenopus*. TGF-beta ligands are initially synthesized as precursor proteins that undergo proteolytic cleavage. The mature segments form active ligand dimers via a disulfide-rich core consisting of the characteristic 'cysteine knot'. TGF-beta signaling begins with binding to a complex of the accessory receptor betaglycan (also known as TGF-beta RIII) and a type II serine/threonine kinase receptor termed TGF-beta RII. This receptor then phosphorylates and activates a type I serine/threonine kinase receptor, either ALK-1 or TGF-beta RI (also called ALK-5). The activated type I receptor phosphorylates and activates Smad proteins that regulate transcription. Use of other signaling pathways that are Smad-independent allows for distinct actions observed in response to TGF-beta in different contexts.

Specificity

Detects TGF-beta 2 in ELISAs and Western blots. In sandwich immunoassays, approximately 10% cross-reactivity with rhTGF-beta 1.2 and less than 0.1% cross-reactivity with rhTGF-alpha, rhTGF-beta 1, rhTGF-beta 3 and raTGF-beta 5 is observed.

Immunogen

Porcine platelet-derived TGF-beta 2

Isotype

IgG

Source/Host	Goat
Species Reactivity	Pig
Purification	Antigen Affinity-purified
Conjugate	Biotin
Applications	Western Blot, ELISA Detection (Matched Pair)
Format	Liquid
Size	50 µg
Buffer	Lyophilized from a 0.2 µm filtered solution in PBS with BSA as a carrier protein.
Preservative	None
Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. 12 months from date of receipt, -20 to -70 °C as supplied. 1 month, 2 to 8 °C under sterile conditions after reconstitution. 6 months, -20 to -70 °C under sterile conditions after reconstitution.

GENE INFORMATION

Gene Name	TGFB2 transforming growth factor, beta 2 [Sus scrofa (pig)]
Official Symbol	TGFB2
Synonyms	TGFB2; transforming growth factor, beta 2; Transforming growth factor beta-2; transforming growth factor beta 2;
Entrez Gene ID	397084
Chromosome Location	10p16; 10
Pathway	Amoebiasis; Cell cycle; Chagas disease (American trypanosomiasis); Chronic myeloid leukemia; Colorectal cancer; Cytokine-cytokine receptor interaction; Dilated cardiomyopathy; Endocytosis;
Function	beta-amyloid binding; growth factor activity; protein homodimerization activity; receptor binding; receptor signaling protein serine/threonine kinase activity; transforming growth factor beta receptor binding; type II transforming growth factor beta recep