

bs-1910R-Biotin

• Rabbit Anti-TGF Beta R3 Polyclonal Antibody, Biotin conjugated

Conjugated Primary Antibodies

Background:

Membrane Receptors

Transforming growth factor beta is a multifunctional cytokine known to modulate several tissue development and repair processes, including cell differentiation, cell cycle progression, cellular migration, adhesion, and extracellular matrix production. There are 3 forms encoded by separate genes TGF β 1, TGF β 2, and TGF β 3. The diverse effects of TGF β are mediated by the TGF β receptors and cell surface binding proteins. In addition to type I TGF β receptor (TGFBR1) and type II (TGFBR2), type III (TGF β III receptor) has been identified. It is a glycoprotein that binds TGF β and exists in both a membrane bound and a soluble form. It may serve as a receptor accessory molecule in both the TGF β and fibroblast growth factor systems. TGF β III receptor lacks a recognizable signaling domain and has no clearly defined role in TGF β signaling. Endothelial cells undergoing epithelial mesenchymal transformation express TGF β III receptor, and TGF β III receptor specific antisera inhibits mesenchyme formation and migration. Misexpression of TGF β III receptor in nontransforming ventricular endothelial cells confers transformation in response to TGF β 2. These results support a model where TGF β III receptor localizes transformation in the heart and plays an essential, nonredundant role in TGF β signaling.

TGF β III receptor, or beta glycan, can function as an inhibin coreceptor with ActRII. TGF β III receptor binds inhibin with high affinity and enhances binding in cells coexpressing ActRII and TGF β III receptor. Inhibin forms crosslinked complexes with both recombinant and endogenously expressed TGF β III receptor and ActRII. TGF β III receptor confers inhibin sensitivity to cell lines that otherwise respond poorly to this hormone. The ability of TGF β III receptor to inhibit or to facilitate inhibin antagonism of activin provides a variation on the emerging roles of proteoglycans as coreceptors modulating ligand receptor sensitivity, selectivity, and function. Beta arrestin 2 binds to TGF β III receptor, triggered by phosphorylation of the receptor on its cytoplasmic domain, likely at threonine 841. Phosphorylation is mediated by TGFBR2, which is itself a kinase, rather than by a G protein coupled receptor kinase. Association with beta arrestin 2 leads to internalization of both receptors and downregulation of TGF β signaling. The regulatory actions of beta arrestins are broader than previously appreciated, extending to the TGF β receptor family as well.

Purification: Was purified by Protein A and peptide affinity chromatography.

Storage:

Prepared as lyophilized powder and shipped on ice. Store at -20°C for one year as lyophilized powder or liquid. Please reconstitute before use.

Reconstitution:

If the antibody is in liquid form, no reconstitution needed.

Reconstitution is only required for the lyophilized antibody. Please refer to the reconstitution instruction card in the package.

Size: 100ul or 100ug lyophilized

Concentration: 1ug/uL

Host: Rabbit

Reactivities:

Human, Mouse, Rat, Chicken, Dog, Pig, Sheep,

Application:

- WB(1:100-500)
- ELISA(1:500-1000)
- IHC-P(1:100-500)
- IHC-F(1:100-500)
- Not yet tested in other applications. Optimal working dilutions must be determined by the end user.

Antibody Type: Polyclonal

Isotype: IgG

Molecular Weight: 94kDa

Preservatives:

10ug/uL BSA and 0.1% NaN₃.

For research use only. CAUTION: Not for human or animal therapeutic or diagnostic use.

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