

TGFB2/TGF-beta RII Protein, Human (Biotinylated, HEK293, Fc-Avi)

Cat. No.:	HY-P78215
Synonyms:	TGFR2; TGFB2; TbetaR-II; TGFβR2; TbetaR-II; TGFβR2; AAT3; FAA3; LDS1B; LDS2; LDS2B; MFS2; RIIC; TAAD2; TβR-II; TβR-II
Species:	Human
Source:	HEK293
Accession:	P37173 (I24-D159)
Gene ID:	7048
Molecular Weight:	55-70 kDa

PROPERTIES

Biological Activity	Immobilized Human Mature TGF beta 2, No Tag at 2 µg/mL (100 µl/Well) on the plate. Dose response curve for Biotinylated Human TGF-beta RII, mFc Tag with the EC ₅₀ of 113.4 ng/mL determined by ELISA.
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.22 µm filtered solution of PBS, pH 7.4.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH ₂ O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background

The transmembrane serine/threonine kinase, TGFB2 (TGF-beta RII), collaborates with the TGF-beta type I serine/threonine kinase receptor, TGFB1, to form the dedicated receptor for TGF-beta cytokines, including TGFB1, TGFB2, and TGFB3. Functioning as a signal transducer, TGFB2 mediates the transmission of TGFB1, TGFB2, and TGFB3 signals from the cell surface to the cytoplasm, thereby orchestrating a diverse array of physiological and pathological processes. These include cell cycle arrest in epithelial and hematopoietic cells, regulation of mesenchymal cell proliferation and differentiation, wound healing, extracellular matrix production, immunosuppression, and carcinogenesis. The receptor complex, comprising 2 TGFB1 and 2 TGFB2 molecules symmetrically bound to the cytokine dimer, leads to the phosphorylation and activation of TGFB1 by the constitutively active TGFB2. Activated TGFB1 subsequently phosphorylates SMAD2, causing its dissociation from the receptor and interaction with SMAD4. The resulting SMAD2-SMAD4 complex translocates to the nucleus, where it modulates the transcription of TGF-beta-regulated genes, constituting the canonical SMAD-dependent TGF-beta signaling cascade. Additionally, TGFB2 participates in non-canonical, SMAD-independent TGF-beta signaling pathways and exhibits transforming growth factor beta-activated receptor activity.

Caution: Product has not been fully validated for medical applications. For research use only.

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