

TGFB2/TGF-beta RII Protein, Rhesus Macaque (HEK293, Fc)

Cat. No.:	HY-P77229
Synonyms:	TGFR-2; TGF-beta type II receptor; TGF-beta receptor type 2; TbetaR-II
Species:	Rhesus Macaque
Source:	HEK293
Accession:	NP_001248080.1 (I24-D159)
Gene ID:	703088
Molecular Weight:	Approximately 50-70 kDa.

PROPERTIES

AA Sequence	<pre> I P P H V Q K S V N N D M M V T D N N G A V K F P Q L C K F C D V R F S T C D N Q K S C L S N C S I T S I C E K P Q E V C V A V W R K N D E N I T L E T V C H D P K L P Y H D F I L E D A A S P K C I M K E K K K P G E T F F M C S C S S D E C N D N I I F S E E Y N T S N P D </pre>
Biological Activity	Immobilized Rhesus TGFB1-His at 10 µg/mL (100 µL/well) can bind Rhesus TGFB2. The ED ₅₀ for this effect is 25.22 ng/mL.
Appearance	Lyophilized powder
Formulation	Lyophilized from a 0.2 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	<p>TGFB2 (TGF-β 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</p>
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symmetrically bound to the cytokine dimer, leads to the phosphorylation and activation of TGFBR1 by the constitutively active TGFBR2. Activated TGFBR1 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, TGFBR2 participates in non-canonical, SMAD-independent TGF-beta signaling pathways and exhibits transforming growth factor beta-activated receptor activity^{[1][2]}.

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

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