

TGFR2/TGF-beta RII Protein, Human (sf9, His)

Cat. No.:	HY-P73428
Synonyms:	TGFR-2; TGF-beta type II receptor; TGF-beta receptor type 2; TbetaR-II
Species:	Human
Source:	Sf9 insect cells
Accession:	P37173 (T23-Q166)
Gene ID:	7048
Molecular Weight:	Approximately 24 kDa

PROPERTIES

AA Sequence	<p>T I P P H V Q K S V N N D M I 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</p> <p>N Q K S C M 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</p> <p>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</p> <p>C N D N I I F S E E Y N T S N P D L L L V I F Q</p>
Biological Activity	Measured by its binding ability in a functional ELISA. Immobilized TGFR2 at 10 µg/mL (100 µL/well) can bind TGFβ1-His and the EC ₅₀ is 130-300 ng/mL.
Appearance	Solution.
Formulation	Supplied as a 0.22 µm filtered solution of 20 mM PBS, 150 mM NaCl, 10 % glycerol, 0.5 mM TCEP, pH 7.0.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	N/A.
Storage & Stability	Stored at -80°C for 1 year. It is stable at -20°C for 3 months after opening. It is recommended to freeze aliquots at -80°C for extended storage. Avoid repeated freeze-thaw cycles.
Shipping	Shipping with dry ice.

DESCRIPTION

Background	<p>The transmembrane serine/threonine kinase, TGFR2 (TGF-beta RII), collaborates with the TGF-beta type I serine/threonine kinase receptor, TGFR1, to form the dedicated receptor for TGF-beta cytokines, including TGFβ1, TGFβ2, and TGFβ3. Functioning as a signal transducer, TGFR2 mediates the transmission of TGFβ1, TGFβ2, and TGFβ3 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,</p>
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comprising 2 TGFBR1 and 2 TGFBR2 molecules 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.

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

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