Recombinant Human TGFR-1/ALK-5 Protein

Catalog No.: RP01408

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Sequence Information

Species
Human

Gene ID
7046

Swiss Prot
P36897-1

Tags
C-hFc&His

Synonyms
TGFBR1,AAT5,ACVRLK4,ALK-5, ALK5,ESS1,LDS1,LDS1A,LDS2A, MSSE,SKR4,TGFR-1,tbetaR-I,TBRI, TBR-i

Product Information

Source
HEK293 cells

Purification
≥ 95 % as determined by SDS-PAGE.

Calculated MW
39.90 kDa

Observed MW
40-55 kDa

Endotoxin
< 1 EU/μg of the protein by LAL method.

Formulation
Lyophilized from a 0.22 μm filtered solution of PBS, pH 7.4.

Reconstitution
Centrifuge the vial before opening. Reconstitute to a concentration of 0.1-0.5 mg/mL in sterile distilled water. Avoid vortex or vigorously pipetting the protein. For long term storage, it is recommended to add a carrier protein or stablizer (e.g. 0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose), and aliquot the reconstituted protein solution to minimize free-thaw cycles.

Background

Transforming growth factor, beta receptor I, also known as Transforming growth factor-beta receptor type I , Serine / threonine-protein kinase receptor R4, Activin receptor-like kinase 5, SKR4, ALK-5, and TGFBR1, is a single-pass type I membrane protein that belongs to the protein kinase superfamily and TGFB receptor subfamily. TGFBR1 / ALK-5 is found in all tissues examined. It is most abundant in placenta and least abundant in brain and heart. TGF-beta functions as a tumor suppressor by inhibiting the cell cycle in the G1 phase. Administration of TGF-beta is able to protect against mammary tumor development in transgenic mouse models in vivo. Disruption of the TGF-beta/SMAD pathway has been implicated in a variety of human cancers, with the majority of colon and gastric cancers being caused by an inactivating mutation of TGF-beta RII. On ligand binding, TGFBR1 / ALK-5 forms a receptor complex consisting of two type I I and two type I transmembrane serine/threonine kinases. Type II receptors phosphorylate and activate type I receptors which auto-phosphorylate, then bind and activate SMAD transcriptional regulators.

Basic Information

Description
Recombinant Human TGFR-1/ALK-5 Protein is produced by HEK293 cells expression system. The target protein is expressed with sequence (Met1-Glu125) of human TGFBR1/ALK5 (Accession #NP_004603.1) fused with a Fc, 6×His tag at the C-terminus.

Activity
Measured by its binding ability in a functional ELISA. Immobilized Human TGF-beta Protein at 2 μg/mL (100 μL/well) can bind TGFBR1 with a linear range of 3.9-80.49 ng/mL.

Shipping
Lyophilized proteins are shipped at ambient temperature.
Liquid proteins are shipped at frozen temperature with dry ice.
Upon receipt, store it immediately at the temperature recommended below.

Storage
Store at -20℃

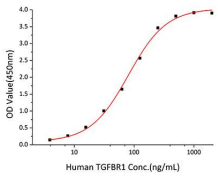
Operational Notes
For your safety and health, please wear a lab coat and disposable gloves for handling.

Contact

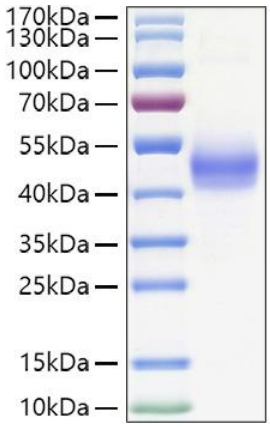
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Validation Data



Immobilized recombinant Human TGF-beta Protein at 2μg/mL (100 μL/well) can bind TGFBR1 with a linear range of 3.9-80.49ng/mL.



Recombinant Human TGFR-1/ALK-5 Protein was determined by SDS-PAGE under reducing conditions with Coomassie Blue.