

## Recombinant Human TGFR-1/ALK-5 Protein

RPCB1424

### Protein Information

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<b>Size:</b>	10 µg , 20 µg , 50 µg , 100 µg	<b>Tag:</b>	C-hFc&His
<b>Reactivity:</b>	Human	<b>Expressed Host:</b>	HEK293 cells
<b>Calculated MW:</b>	39.90 kDa	<b>Observed MW:</b>	40-55 kDa

### Background

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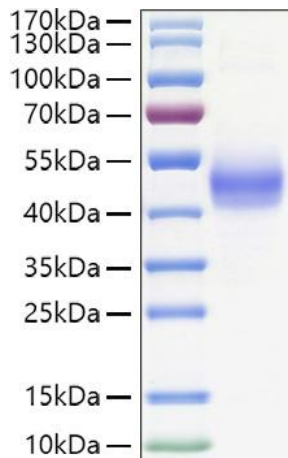
Transforming growth factor, beta receptor I, also known as Transforming growth factor-beta receptor type I, Serine / threonine-protein kinase receptor R4, Activin receptor-like kinase 5, SKR4, ALK-5, and TGFBR1, is a single-pass type I membrane protein that belongs to the protein kinase superfamily and TGFBR1 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 and two type II transmembrane serine/threonine kinases. Type II receptors phosphorylate and activate type I receptors which auto-phosphorylate, then bind and activate SMAD transcriptional regulators.

### Properties

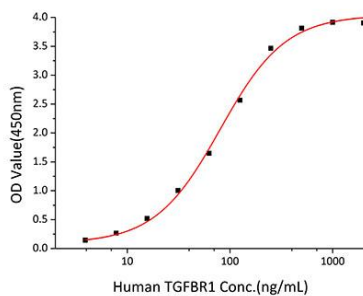
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<b>Synonyms:</b>	TGFBR1, AAT5, ACVRLK4, ALK-5, ALK5, ESS1, LDS1, LDS1A, LDS2A, MSSE, SKR4, TGFR-1, tbetaR-I, TBRI, TBR-i
<b>Gene ID:</b>	7046
<b>Endotoxin:</b>	< 1 EU/µg of the protein by LAL method.
<b>Description:</b>	High quality, high purity and low endotoxin recombinant Recombinant Human TGFR-1/ALK-5 Protein (RPCB1424), tested reactivity in HEK293 cells and has been validated in SDS-PAGE. 100% guaranteed.
<b>Purity:</b>	≥ 95 % as determined by SDS-PAGE.
<b>Storage:</b>	Store at -20°C. Store the lyophilized protein at -20°C to -80 °C up to 1 year from the date of receipt. After reconstitution, the protein solution is stable at -20°C for 3 months, at 2-8°C for up to 1 week.

## Validation Data



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



Immobilized recombinant Human TGF-beta Protein at 2 $\mu$ g/mL (100  $\mu$ L/well) can bind TGFBR1 with a linear range of 3.9-80.49ng/mL.