Datasheet for ABIN7198306

TGFBR1 Protein (His tag,Fc Tag)

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Overview

Quantity:	100 µg
Target:	TGFBR1
Origin:	Human
Source:	HEK-293 Cells
Protein Type:	Recombinant
Biological Activity:	Active
Purification tag / Conjugate:	This TGFBR1 protein is labelled with His tag,Fc Tag.

Product Details

Purpose:	Recombinant Human TGFBR1/ALK-5 Protein (His & Fc Tag)(Active)
Sequence:	Met 1-Glu 125
Characteristics:	A DNA sequence encoding the human TGFBR1 (NP_004603.1) extracellular domain (Met 1-Glu 125) was fused with the C-terminal polyhistidine-tagged Fc region of human IgG1 at the C-terminus.
Purity:	> 85 % as determined by reducing SDS-PAGE.
Endotoxin Level:	< 1.0 EU per µg as determined by the LAL method.
Biological Activity Comment:	1. Measured by its binding ability in a functional ELISA. Immobilized mouse CD105 at 10 µg/ml (100 µl/well) can bind human TGFRB1 with a linear ranger of 6.4-800 ng/ml.2. Measured by its ability to bind human CD105 in a functional ELISA.

Target Details

Target:	TGFBR1
Alternative Name:	TGFBR1/ALK-5 (TGFBR1 Products)
Background:	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 which 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. TGF-beta signaling via TGFBR1 / ALK-5 is not required in myocardial cells during mammalian cardiac development, but plays an irreplaceable cell-autonomous role regulating cellular communication, differentiation and proliferation in endocardial and epicardial cells. Defects in TGFBR1 / ALK-5 are the cause of Loeys-Dietz syndrome type 1A (LDS1A), Loeys-Dietz syndrome type 2A (LDS2A), and aortic aneurysm familial thoracic type 5 (AAT5). Synonym: AAT5,ACVRLK4,ALK-5,ALK5,ESS1,LDS1,LDS1A,LDS2A,MSSE,SKR4,tbetaR-I,TGFR-1
Molecular Weight:	38.8 kDa
NCBI Accession:	NP_004603
Pathways:	Growth Factor Binding

Application Details

Restrictions:	For Research Use only

Handling

Format:	Lyophilized
Reconstitution:	Please refer to the printed manual for detailed information.
Buffer:	Lyophilized from sterile PBS, pH 7.4

Handling

Storage:	4 °C,-20 °C,-80 °C
Storage Comment:	Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.