abcam

Product datasheet

Recombinant human TGF beta Receptor I protein ab105908

5 Images

Description

Product name	Recombinant human TGF beta Receptor I protein
Biological activity	The Specific activity of ab105908 was determined to be 3 nmol/min/mg.
Purity	> 90 % Densitometry. Purity was determined to be >90% by densitometry. Affinity purified.
Expression system	Baculovirus infected Sf9 cells
Accession	P36897
Protein length	Protein fragment
Animal free	No
Nature	Recombinant
Species	Human
Predicted molecular weight	66 kDa including tags
Amino acids	80 to 503
Tags	GST tag N-Terminus

Specifications

Our **Abpromise guarantee** covers the use of **ab105908** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Applications	Functional Studies Western blot
Form	Liquid
Additional notes	**ab204884** (Smad3 peptide) can be utilized as a substrate for assessing kinase activity

Preparation and Storage

Stability and Storage	Shipped on dry ice. Upon delivery aliquot and store at -80ºC. Avoid freeze / thaw cycles. pH: 7.50 Constituents: 0.307% Glutathione, 0.00174% PMSF, 0.00385% DTT, 0.79% Tris HCl, 0.00292%

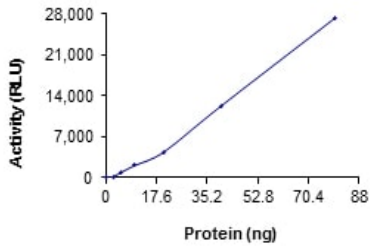
EDTA, 25% Glycerol (glycerin, glycerine), 0.87% Sodium chloride

This product is an active protein and may elicit a biological response in vivo, handle with caution.

General Info

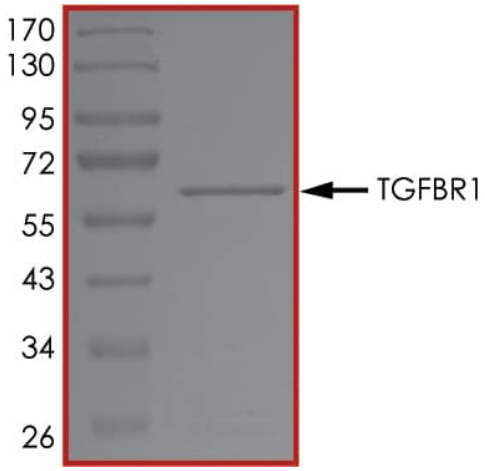
Function	On ligand binding, forms a receptor complex consisting of two type II and two type I transmembrane serine/threonine kinases. Type II receptors phosphorylate and activate type I receptors which autophosphorylate, then bind and activate SMAD transcriptional regulators. Receptor for TGF-beta.
Tissue specificity	Found in all tissues examined, most abundant in placenta and least abundant in brain and heart.
Involvement in disease	Defects in TGFBR1 are the cause of Loeys-Dietz syndrome type 1A (LDS1A) [MIM:609192]; also known as Furlong syndrome or Loeys-Dietz aortic aneurysm syndrome (LDAS). LDS1 is an aortic aneurysm syndrome with widespread systemic involvement. The disorder is characterized by arterial tortuosity and aneurysms, craniosynostosis, hypertelorism, and bifid uvula or cleft palate. Other findings include exotropy, micrognathia and retrognathia, structural brain abnormalities, intellectual deficit, congenital heart disease, translucent skin, joint hyperlaxity and aneurysm with dissection throughout the arterial tree. Defects in TGFBR1 are the cause of Loeys-Dietz syndrome type 2A (LDS2A) [MIM:608967]. LDS2 is an aortic aneurysm syndrome with widespread systemic involvement. Physical findings include prominent joint laxity, easy bruising, wide and atrophic scars, velvety and translucent skin with easily visible veins, spontaneous rupture of the spleen or bowel, diffuse arterial aneurysms and dissections, and catastrophic complications of pregnancy, including rupture of the gravid uterus and the arteries, either during pregnancy or in the immediate postpartum period. LDS2 is characterized by the absence of craniofacial abnormalities with the exception of bifid uvula that can be present in some patients. Defects in TGFBR1 are the cause of aortic aneurysm familial thoracic type 5 (AAT5) [MIM:608967]. Aneurysms and dissections of the aorta usually result from degenerative changes in the aortic wall. Thoracic aortic aneurysms and dissections are primarily associated with a characteristic histologic appearance known as 'medial necrosis' in which there is degeneration and fragmentation of elastic fibers, loss of smooth muscle cells, and an accumulation of basophilic ground substance.
Sequence similarities	Belongs to the protein kinase superfamily. TKL Ser/Thr protein kinase family. TGFB receptor subfamily. Contains 1 GS domain. Contains 1 protein kinase domain.
Post-translational modifications	Phosphorylated at basal levels in the absence of ligand binding. Activated by multiple phosphorylation, mainly in the GS region.
Cellular localization	Membrane.

Images



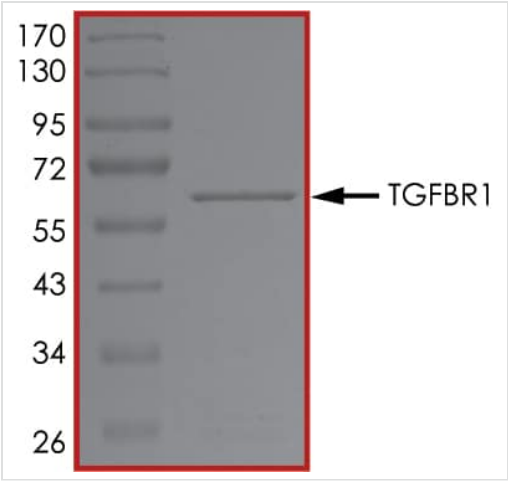
Functional Studies - Recombinant human TGF beta Receptor I protein (ab105908)

The specific activity of TGF beta Receptor I (ab105908) was determined to be 25 nmol/min/mg as per activity assay protocol and was equivalent to 2.5 nmol/min/mg as per radiometric assay



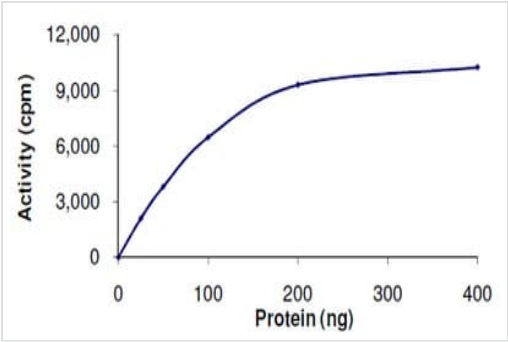
SDS-PAGE - Recombinant human TGF beta Receptor I protein (ab105908)

SDS PAGE analysis of ab105908



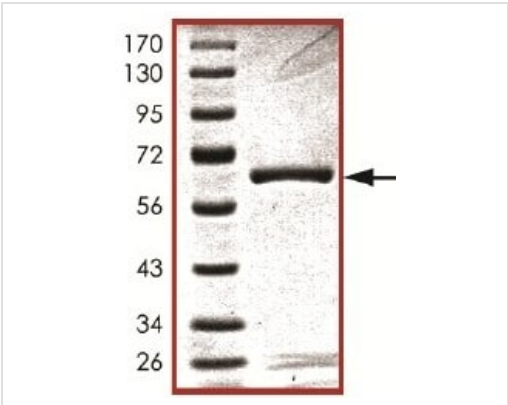
SDS PAGE analysis of ab105908

SDS-PAGE - Recombinant human TGF beta Receptor I protein (ab105908)



Kinase Assay demonstrating specific activity of ab105908 at 3 nmol/min/mg.

Functional Studies - Recombinant human TGF beta Receptor I protein (ab105908)



SDS-PAGE showing ab105908 at approximately 66kDa.

SDS-PAGE - Recombinant human TGF beta Receptor I protein (ab105908)

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