



TGF β RI Rabbit mAb

Catalog No	YP-rAb-17312
Isotype	IgG
Reactivity	Human,Mouse,Rat
Applications	WB,IF,IP,ELISA
Gene Name	TGFBR1 ALK5 SKR4
Protein Name	TGF-beta receptor type-1
Purification Process	Protein A
Specificity	Endogenous
Formulation	PBS, 50% glycerol, 0.05% Proclin 300, 0.05%BSA
Source	Monoclonal, Rabbit,IgG
Dilution	WB 1:2000-1:10000; IF 1:200-1:1000; ELISA 1:5000-1:20000; IP 1:50-1:200;
Concentration	0.5 mg/ml
Purity	≥90%
Storage Stability	-15 ° C to -25 ° C/1 year(Do not lower than -25 ° C)
Synonyms	TGF β Receptor I;TGF-beta receptor type-1;TGFBR1 ; ALK5 ; SKR4 ; TGF-beta receptor type-1 ; TGFR-1 ; Activin A receptor type II-like protein kinase of 53kD ; Activin receptor-like kinase 5 ; ALK-5 ; Serine/threonine-protein kinase receptor R4 ; TGF-beta type I receptor ; Transfor;TGFBR1 ALK5 SKR4
Observed Band	55kD
Calculated Molecular Weight	56kD
Cell Pathway	Cell membrane ; Single-pass type I membrane protein . Cell junction, tight junction . Cell surface . Membrane raft .
Tissue Specificity	Found in all tissues examined, most abundant in placenta and least abundant in brain and heart. Expressed in a variety of cancer cell lines (PubMed:25893292).
Function	Catalytic activity:ATP + [receptor-protein] = ADP + [receptor-protein] phosphate.,cofactor:Magnesium or manganese.,Disease: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.,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 exotropia, micrognathia and retrognathia, structural brain abnormalities, intellectual deficit, congenital heart disease, translucent skin, joint hyperlaxity and aneurysm with dissection throughout the arterial tree. Disease: 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. 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. PTM: Phosphorylated at basal levels in the absence of ligand binding. Activated by multiple phosphorylation, mainly in the GS region. similarity: Belongs to the protein kinase superfamily. similarity: Belongs to the protein kinase superfamily. TKL Ser/Thr protein kinase family. TGFB receptor subfamily. similarity: Contains 1 GS domain. similarity: Contains 1 protein kinase domain. subunit: Interacts with CD109. The unphosphorylated protein interacts with FKBP1A and is stabilized the inactive conformation. Phosphorylation of the GS region abrogates FKBP1A binding. Interacts with SMAD2 when phosphorylated on several residues in the GS region. tissue specificity: Found in all tissues examined, most abundant in placenta and least abundant in brain and heart.

Background

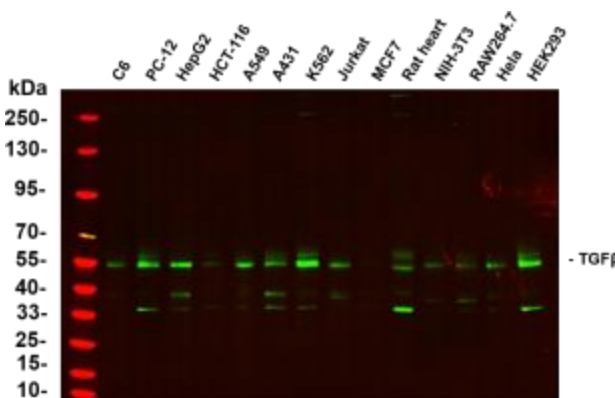
The protein encoded by this gene forms a heteromeric complex with type II TGF-beta receptors when bound to TGF-beta, transducing the TGF-beta signal from the cell surface to the cytoplasm. The encoded protein is a serine/threonine protein kinase. Mutations in this gene have been associated with Loeys-Dietz aortic aneurysm syndrome (LDAS). Multiple transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Aug 2008],

matters needing attention

Avoid repeated freezing and thawing!

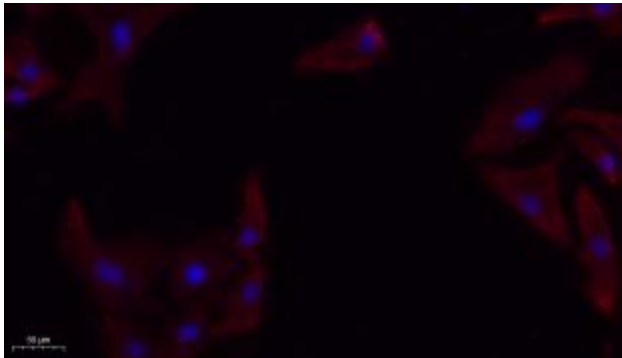
Usage suggestions

This product can be used in immunological reaction related experiments. For more information, please consult technical personnel.

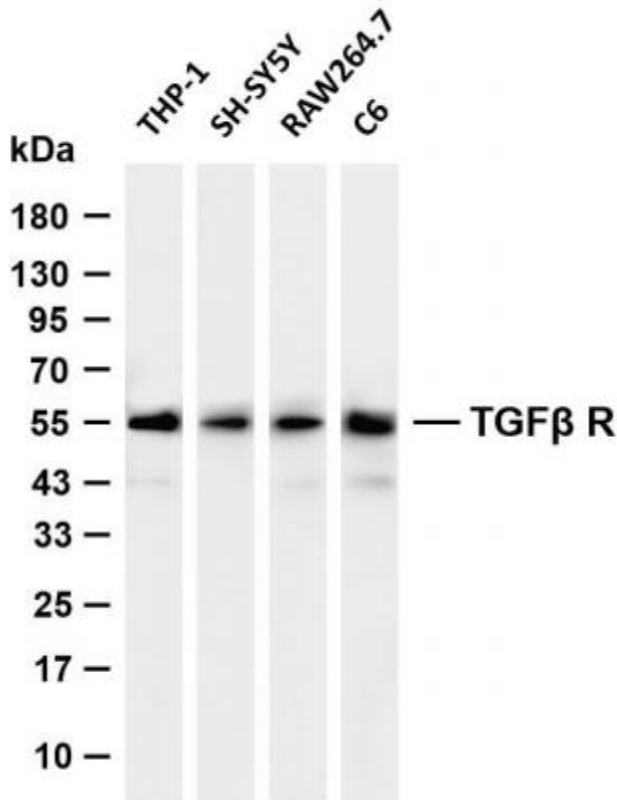


Various whole cell lysates were separated by 4-20% SDS-PAGE, and the primary antibody was used at 4~C, over night with a 1:5000 dilution. The Dylight 800-conjugated Goat anti-Rabbit antibody





Immunofluorescence analysis of A549. 1, primary Antibody(red) was diluted at 1:200(4°C overnight). 2, Goat Anti Rabbit IgG (H&L) - Alexa Fluor 594 Secondary antibody was diluted at 1:1000(room temperature, 50min). 3, DAPI(blue) 10min.



Various whole cell lysates were separated by 4-20% SDS-PAGE, and the membrane was blotted with anti-TGFβ RI antibody. The HRP-conjugated Goat anti-Rabbit IgG (H + L) antibody was used to detect the antibody. Lane 1: THP-1 Lane 2: SH-SY5Y Lane 3: RAW264.7 Lane 4: C6 Predicted band size: 56kDa Observed band size: 55kDa

