Active Transforming Growth Factor Beta Receptor II (TGFbR2)

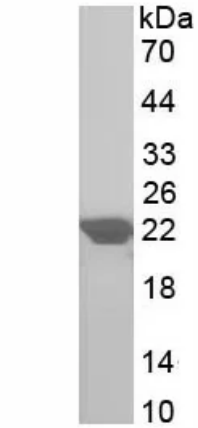
Catalog#:PEH12886

概述（Summary）

别称（Alternative Names）	MFS2
纯度（Purity）	Greater than 95% as determined by reducing SDS-PAGE.
内毒素（Endotoxin level）	Please contact with the lab for this information
蛋白构建（Construction）	【Thr23-Gln166】
Accession #	P37173
表达宿主（Host）	E.coli
种属（Species）	Homo sapiens (Human)
预测分子量（Predicted MW）	20.0 kDa
制剂（Form）	Lyophilized from a 0.2 μm filtered solution of PBS, pH7.4, containing 0.01% SKL, 1mM DTT, 5% Trehalose and Proclin300.
运输方式（Shipping）	The product is shipped with ice bag. Upon receipt, store it immediately at the temperature listed below.
稳定性&储存（Stability &Storage）	12 months at -20°C to -80°C in lyophilized state.6 months at -20°C to -80°C under sterile conditions after reconstitution.7-10 days at 2°C to 8°C under sterile conditions after reconstitution.Please minimize freeze-thaw cycles.
复溶（Reconstitution）	Reconstitute in 10mM PBS (pH7.4) to a concentration of 0.1-1.0 mg/mL. Do not vortex.
背景介绍（References）	Transmembrane serine/threonine kinase forming with the TGF-beta type I serine/threonine kinase receptor, TGFBR1, the non-promiscuous receptor for the TGF-beta cytokines TGFB1, TGFB2 and TGFB3. Transduces the TGFB1, TGFB2 and TGFB3 signal from the cell surface to the cytoplasm and is thus regulating a plethora of physiological and pathological processes including cell cycle arrest in epithelial and hematopoietic cells, control of mesenchymal cell proliferation and differentiation, wound healing, extracellular matrix production, immunosuppression and carcinogenesis. The formation of the receptor complex composed of 2 TGFBR1 and 2 TGFBR2 molecules symmetrically bound to the

cytokine dimer results in the phosphorylation and the activation of TGFRB1 by the constitutively active TGFBR2. Activated TGFBR1 phosphorylates SMAD2 which dissociates from the receptor and interacts with SMAD4. The SMAD2-SMAD4 complex is subsequently translocated to the nucleus where it modulates the transcription of the TGF-beta-regulated genes. This constitutes the canonical SMAD-dependent TGF-beta signaling cascade. Also involved in non-canonical, SMAD-independent TGF-beta signaling pathways.

电泳图（SDS-PAGE image）



Greater than 95% as determined by reducing SDS-PAGE.

活性图（Bioactivity image）

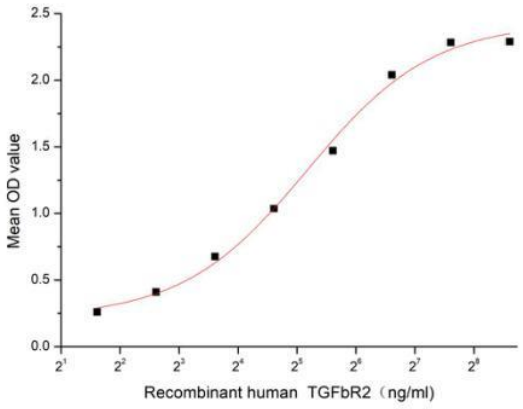


Figure 1. The binding activity of recombinant human TGFBR2 and recombinant rat ENG

Transforming growth factor beta receptor 2 (TGFBR2) is a tumor suppressor gene that plays a role in the differentiation of striated cells and remodeling of coronary arteries. Single nucleotide polymorphisms (SNPs) of this gene are associated with Marfan syndrome and sudden death in patients with coronary artery disease. Cardiovascular remodeling and T cell activation of TGFBR2 gene suggest that the TGFBR2 gene SNPs are related to the pathogenesis of Kawasaki disease (KD) and coronary artery lesion (CAL). Endoglin can regulate endothelial cell shape changes in response to blood flow, which drive vascular remodeling

and establishment of normal vascular morphology during angiogenesis. A functional ELISA assay was conducted to detect the interaction of recombinant human TGFBR2 and recombinant rat Endoglin (ENG). Briefly, TGFBR2 was diluted serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100 µl were then transferred to ENG-coated microtiter wells and incubated for 1h at 37℃. Wells were washed with PBST and incubated for 1h with anti-TGFBR2 pAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary antibody for 1h at 37℃, wells were aspirated and washed 5 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37℃. Finally, add 50 µL stop solution to the wells and read at 450/630nm immediately. The binding activity of recombinant human TGFBR2 and recombinant rat ENG was shown in Figure 1, the EC50 for this effect is 36.1 ng/mL.

注意事项（Note）

For Research Use Only , Not for Diagnostic Use.