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TGF beta Receptor II Antibody

Rabbit mAb
Catalog # AP91309

Product Information

Application	WB
Primary Accession	P37173
Reactivity	Human
Clonality	Monoclonal
Other Names	TGF-beta receptor type-2; TGFR-2; TGFR2; TGF-beta type II receptor; TbetaR-II; TGFBR2;
Isotype	Rabbit IgG
Host	Rabbit
Calculated MW	64568

Additional Information

Dilution	WB 1:500~1:2000
Purification	Affinity-chromatography
Immunogen	A synthesized peptide derived from human TGF beta Receptor II
Description	TGFβs mediate their activity by high affinity binding to the type II receptor (TGFβ RII) transmembrane protein with a cytoplasmic serine-threonine kinase domain. For signaling growth inhibition and early gene responses the type II receptor requires both its kinase activity and association with a TGFβ-binding protein, designated the type I receptor. Two independent groups have recently described the cloning and sequence analysis of genes encoding TGFβ type I receptor proteins designated ALK-5 (TβR-1) and TSR-1, respectively.
Storage Condition and Buffer	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle.

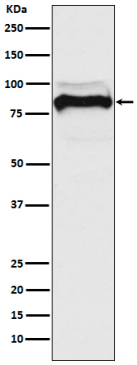
Protein Information

Name	TGFBR2
Function	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 thus regulates 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 activation of TGFBR1 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.

Cellular Location Cell membrane; Single-pass type I membrane protein. Membrane raft

Images



Western blot analysis of TGF beta Receptor II expression in A549 cell lysate.