

Rabbit TGFR1 Polyclonal Antibody | anti-TGFR1 antibody

Phospho-TGFR1 (Thr186) Antibody

CATALOG # AAA329338	HOST Rabbit	REACTIVITY Human, Mouse, Rat	APPLICATIONS ELISA, Immunohistochemistry
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PRODUCT SYNONYMS

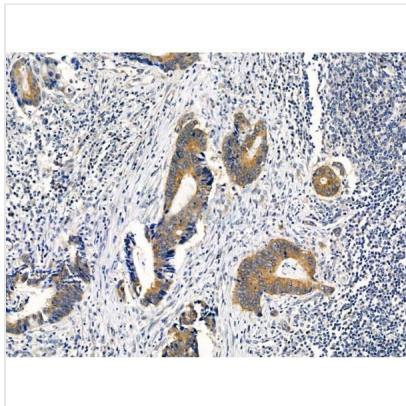
TGFR1; Polyclonal Antibody; Phospho-TGFR1 (Thr186) Antibody; AAT 5; AAT5; Activin A receptor type II like kinase 53kDa; Activin A receptor type II like kinase; 53kD; Activin A receptor type II like protein kinase of 53kD; activin A receptor type II-like kinase; 53kDa; activin A receptor type II-like protein kinase of 53kD; Activin receptor like kinase 5; Activin receptor-like kinase 5; ACVRLK 4; ACVRLK4; ALK 5; ALK-5; ALK5; LDS1A; LDS2A; MSSE; Serine/threonine protein kinase receptor R4; Serine/threonine-protein kinase receptor R4; SKR 4; SKR4; TbetaR I; TbetaR-I; TGF beta receptor type 1; TGF beta receptor type I; TGF beta type I receptor; TGF-beta receptor type I; TGF-beta receptor type-1; TGF-beta type I receptor; TGFR 1; TGFR1 protein; TGFR 1; TGFR-1; TGFR1; TGFR1_HUMAN; Transforming growth factor beta receptor 1; Transforming growth factor beta receptor I (activin A receptor type II like kinase; 53kD); Transforming growth factor beta receptor I; transforming growth factor; beta receptor 1; beta receptor I (activin A receptor type II-like kinase; Transforming growth factor-beta receptor type I; anti-TGFR1 antibody

PRODUCT SPECIFICATIONS

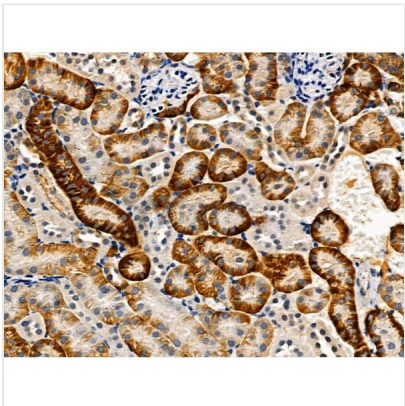
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Isotype	Rabbit IgG
Specificity	Phospho-TGFR1 (Thr186) Antibody detects endogenous levels of TGFR1 only when phosphorylated at Thr186. Tissue Specificity: Found in all tissues examined, most abundant in placenta and least abundant in brain and heart. Expressed in a variety of cancer cell lines.
Purity/Purification	The antibody is from purified rabbit serum by affinity purification via sequential chromatography on phospho-peptide and non-phospho-peptide affinity columns.
Form/Format	Liquid. Rabbit IgG in phosphate buffered saline, pH7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Applicable Applications for anti-TGFR1 antibody	ELISA (Peptide ELISA), IHC (Immunohistochemistry)
Immunogen	A synthesized peptide derived from human TGFR1 around the phosphorylation site of Thr186.
Conjugation	Unconjugated
Fragment	Fab fragment
Post Translational Modifications	Phosphorylated at basal levels in the absence of ligand. Activated upon phosphorylation by TGFR2, mainly in the GS domain. Phosphorylation in the GS domain abrogates FKBP1A-binding.N-Glycosylated.Ubiquitinated; undergoes ubiquitination catalyzed by several E3 ubiquitin ligases including SMURF1, SMURF2 and NEDD4L2. Results in the proteasomal and/or lysosomal degradation of the receptor thereby negatively regulating its activity. Deubiquitinated by USP15, leading to stabilization of the protein and enhanced TGF-beta signal. Its ubiquitination and proteasome-mediated degradation is negatively regulated by SDCBP.

Subunit Structure	Homodimer; in the endoplasmic reticulum but also at the cell membrane. Heterohexamer; TGFB1, TGFB2 and TGFB3 homodimeric ligands assemble a functional receptor composed of two TGFBR1 and TGFBR2 heterodimers to form a ligand-receptor heterohexamer. The respective affinity of TGBR1 and TGFBR2 for the ligands may modulate the kinetics of assembly of the receptor and may explain the different biological activities of TGFB1, TGFB2 and TGFB3. Interacts with CD109; inhibits TGF-beta receptor activation in keratinocytes. Interacts with RBPMS. Interacts (unphosphorylated) with FKBP1A; prevents TGFBR1 phosphorylation by TGFBR2 and stabilizes it in the inactive conformation. Interacts with SMAD2, SMAD3 and ZFYVE9; ZFYVE9 recruits SMAD2 and SMAD3 to the TGF-beta receptor. Interacts with TRAF6 and MAP3K7; induces MAP3K7 activation by TRAF6. Interacts with PARD6A; involved in TGF-beta induced epithelial to mesenchymal transition. Interacts with SMAD7, NEDD4L, SMURF1 and SMURF2; SMAD7 recruits NEDD4L, SMURF1 and SMURF2 to the TGF-beta receptor. Interacts with USP15 and VPS39. Interacts with SDCBP (via C-terminus) Interacts with CAV1 and this interaction is impaired in the presence of SDCBP. Interacts with APPL1; interaction is TGF beta dependent; mediates trafficking of the TGFBR1 from the endosomes to the nucleus via microtubules in a TRAF6-dependent manner.
Similarity	Belongs to the protein kinase superfamily. TKL Ser/Thr protein kinase family. TGFB receptor subfamily.
Subcellular Location	Cell membrane>Single-pass type I membrane protein. Cell junction>Tight junction. Cell surface. Membrane raft.
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.

IMAGES



IHC (Immunohistochemistry)
 Staining Human colorectal cancer by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the primary antibody at 4 degree C overnight. An HRP conjugated anti-Rabbit antibody was used as the secondary antibody.



IHC (Immunohistochemistry)
 At 1/100 staining Mouse kidney tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the primary antibody at 4 degree C overnight. An HRP conjugated anti-Rabbit antibody was used as the secondary antibody.

ADDITIONAL INFORMATION

Related Product Information for anti-TGFBR1 antibody	Transmembrane serine/threonine kinase forming with the TGF-beta type II serine/threonine kinase receptor, TGFBR2, 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 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. For instance, TGFBR1 induces TRAF6 autoubiquitination which in turn results in MAP3K7 ubiquitination and activation to trigger apoptosis. Also regulates epithelial to mesenchymal transition through a SMAD-independent signaling pathway through PARD6A phosphorylation and activation.
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NCBI AND UNIPROT INFORMATION

NCBI GI #	195963412
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NCBI GeneID	7046
NCBI Accession #	NP_001124388.1
NCBI GenBank Nucleotide #	NM_001130916.1
UniProt Accession #	P36897; Q6IR47; Q706C0; Q706C1
Molecular Weight	55,960 Da
NCBI Official Full Name	TGF-beta receptor type-1 isoform 2
NCBI Official Synonym Full Names	transforming growth factor, beta receptor 1
NCBI Official Symbol	TGFBR1
NCBI Official Synonym Symbols	AAT5; ALK5; MSSE; SKR4; ALK-5; LDS1A; LDS2A; TGFR-1; ACVRLK4
NCBI Protein Information	TGF-beta receptor type-1; tbetaR-I; TGF-beta receptor type I; TGF-beta type I receptor; activin receptor-like kinase 5; transforming growth factor beta receptor I; serine/threonine-protein kinase receptor R4; activin A receptor type II-like kinase, 53kD;
UniProt Protein Name	TGF-beta receptor type-1
UniProt Gene Name	TGFBR1
UniProt Synonym Gene Names	ALK5; SKR4; TGFR-1; ALK-5; ALK5; SKR4; TGF-beta receptor type I; TbetaR-I
UniProt Entry Name	TGFR1_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/polyclonal/tgfr1-antibody-peptide-elisa-immunohistochemistry-elisa/329338>