

**TGFBR1 (aa50-63) Antibody (internal region)**  
**Peptide-affinity purified goat antibody**  
**Catalog # AF3599a****Specification**

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**TGFBR1 (aa50-63) Antibody (internal region) - Product Information**

Application	WB, IHC, FC, Pep-ELISA
Primary Accession	<a href="#">P36897</a>
Other Accession	<a href="#">NP_004603.1</a> , <a href="#">NP_001124388.1</a> , <a href="#">7046</a> , <a href="#">21812</a> (mouse), <a href="#">29591</a> (rat)
Reactivity	Mouse, Rat
Predicted	Human, Pig, Dog
Host	Goat
Clonality	Polyclonal
Concentration	0.5 mg/ml
Isotype	IgG
Calculated MW	55960

**TGFBR1 (aa50-63) Antibody (internal region) - Additional Information****Gene ID** 7046**Other Names**

TGF-beta receptor type-1, TGFR-1, 2.7.11.30, Activin A receptor type II-like protein kinase of 53kD, Activin receptor-like kinase 5, ALK-5, ALK5, Serine/threonine-protein kinase receptor R4, SKR4, TGF-beta type I receptor, Transforming growth factor-beta receptor type I, TGF-beta receptor type I, TbetaR-I, TGFBR1, ALK5, SKR4

**Dilution**

WB~~1:1000  
IHC~~1:100~500  
FC~~1:10~50  
Pep-ELISA~~N/A

**Format**

0.5 mg/ml in Tris saline, 0.02% sodium azide, pH7.3 with 0.5% bovine serum albumin

**Storage**

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions**

TGFBR1 (aa50-63) Antibody (internal region) is for research use only and not for use in diagnostic or therapeutic procedures.

**TGFBR1 (aa50-63) Antibody (internal region) - Protein Information**

**Name** TGFBR1**Synonyms** ALK5, SKR4**Function**

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 (PubMed:<a href="http://www.uniprot.org/citations/33914044" target="\_blank">33914044</a>). 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.

**Cellular Location**

Cell membrane; Single-pass type I membrane protein. Cell junction, tight junction. Cell surface. Membrane raft

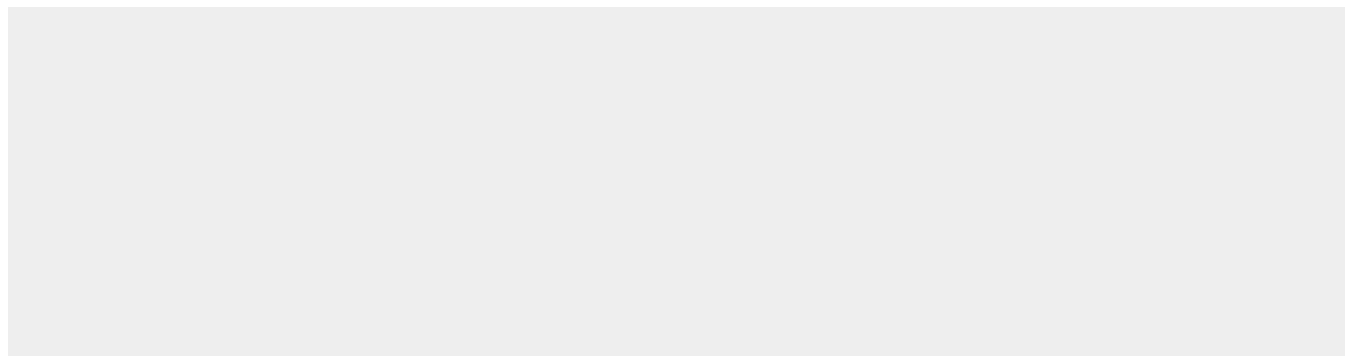
**Tissue Location**

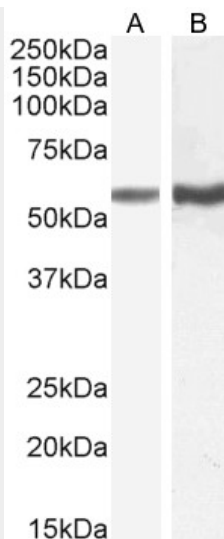
Found in all tissues examined, most abundant in placenta and least abundant in brain and heart. Expressed in a variety of cancer cell lines (PubMed:25893292).

**TGFBR1 (aa50-63) Antibody (internal region) - Protocols**

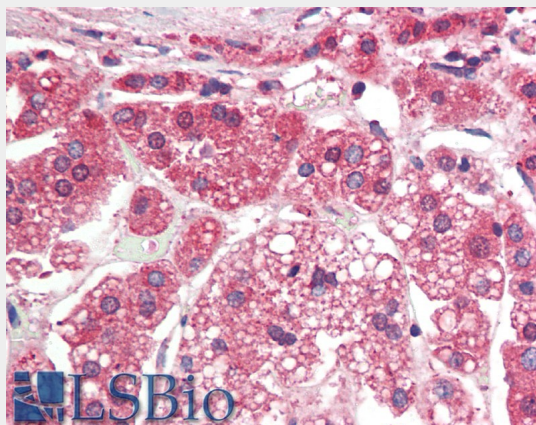
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

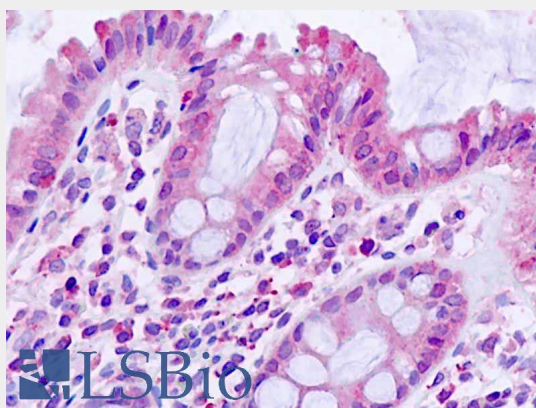
**TGFBR1 (aa50-63) Antibody (internal region) - Images**



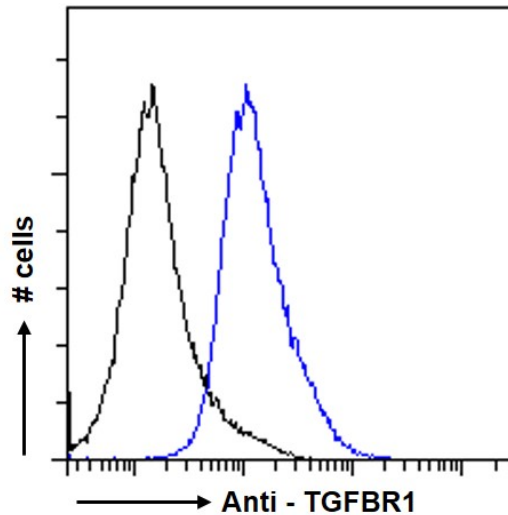
EB11053 (0.1 $\mu$ g/ml) staining of Rat Liver (A) and (0.03 $\mu$ g/ml) Lung (B) lysate (35 $\mu$ g protein in RIPA buffer). Detected by chemiluminescence.



EB11053 (5 $\mu$ g/ml) staining of paraffin embedded Human Adrenal Gland. Steamed antigen retrieval with citrate buffer pH 6, AP-staining.



EB11053 (5 $\mu$ g/ml) staining of paraffin embedded Human Small Intestine. Steamed antigen retrieval with citrate buffer pH 6, AP-staining.



EB11053 Flow cytometric analysis of paraformaldehyde fixed HeLa cells (blue line), permeabilized with 0.5% Triton. Primary incubation 1hr (10ug/ml) followed by Alexa Fluor 488 secondary antibody (1ug/ml). IgG control: Unimmunized goat IgG (black line) fol

#### **TGFBR1 (aa50-63) Antibody (internal region) - Background**

This antibody is expected to recognize both reported isoforms (NP\_004603.1; NP\_001124388.1). The immunizing peptide represents part of a potential extracellular domain.

#### **TGFBR1 (aa50-63) Antibody (internal region) - References**

Overexpression of transforming growth factor  $\beta$ 1 in malignant prostate cells is partly caused by a runaway of TGF- $\beta$ 1 auto induction mediated through a defective recruitment of protein phosphatase 2A by TGF- $\beta$  type I receptor. Yu N, Kozlowski JM, Park II, Chen L, Zhang Q, Xu D, Doll JA, Crawford SE, Brendler CB, Lee C. Urology. 2010 Dec;76(6):1519.e8-13. PMID: 21030067