




## Product datasheet

# Anti-TGF beta Receptor I antibody ab121024

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### Overview

<b>Product name</b>	Anti-TGF beta Receptor I antibody
<b>Description</b>	Goat polyclonal to TGF beta Receptor I
<b>Host species</b>	Goat
<b>Tested applications</b>	<b>Suitable for:</b> IHC-P, Flow Cyt (Intra), WB
<b>Species reactivity</b>	<b>Reacts with:</b> Rat, Human <b>Predicted to work with:</b> Mouse, Rabbit, Horse, Cow, Dog, Pig, Rhesus monkey, Gorilla 
<b>Immunogen</b>	Synthetic peptide within Human TGF beta Receptor I aa 50-150 (internal sequence). The exact immunogen sequence used to generate this antibody is proprietary information. If additional detail on the immunogen is needed to determine the suitability of the antibody for your needs, please <b><u>contact</u></b> our Scientific Support team to discuss your requirements. Corresponds to NP_004603.1 and NP_001124388.1. Database link: <b><u>P36897</u></b> <div>  <a href="#">Run BLAST with</a>  <a href="#">Run BLAST with</a> </div>
<b>Positive control</b>	WB: Rat liver and lung tissue lysates. IHC-P: Human adrenal gland and small intestine tissues. Flow Cyt (Intra): HeLa cells
<b>General notes</b>	<p>The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.</p> <p>If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&amp;As</p>

### Properties

<b>Form</b>	Liquid
<b>Storage instructions</b>	Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.
<b>Storage buffer</b>	pH: 7.30 Preservative: 0.02% Sodium azide Constituents: 99% Tris buffered saline, 0.5% BSA
<b>Purity</b>	Immunogen affinity purified

<b>Purification notes</b>	ab121024 is purified from Goat serum by ammonium sulphate precipitation followed by antigen affinity chromatography using the immunizing peptide.
<b>Clonality</b>	Polyclonal
<b>Isotype</b>	IgG

## Applications

**The Abpromise guarantee** Our **Abpromise guarantee** covers the use of ab121024 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
<b>IHC-P</b>		Use a concentration of 5 µg/ml. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.
<b>Flow Cyt (Intra)</b>		Use a concentration of 10 µg/ml.
<b>WB</b>	★☆☆☆☆ (1)	Use a concentration of 0.03 - 0.1 µg/ml. Detects a band of approximately 55 kDa (predicted molecular weight: 55 kDa). 3% milk in TBST for blocking, 1 hr at RT. Primary antibody diluted in blocking buffer, 1 hr at room temperature.

## Target

<b>Function</b>	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.
<b>Tissue specificity</b>	Found in all tissues examined, most abundant in placenta and least abundant in brain and heart.
<b>Involvement in disease</b>	<p>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.</p> <p>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.</p> <p>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</p>

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.

#### Sequence similarities

Belongs to the protein kinase superfamily. TKL Ser/Thr protein kinase family. TGFB receptor subfamily.

Contains 1 GS domain.

Contains 1 protein kinase domain.

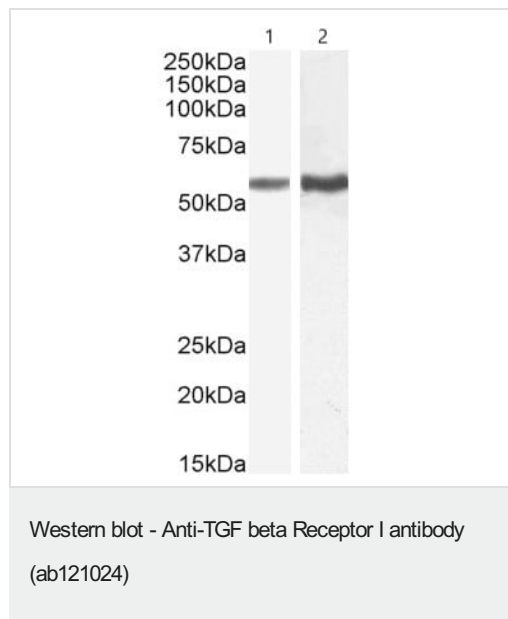
#### Post-translational modifications

Phosphorylated at basal levels in the absence of ligand binding. Activated by multiple phosphorylation, mainly in the GS region.

#### Cellular localization

Membrane.

#### Images



**Lane 1 :** Anti-TGF beta Receptor I antibody (ab121024) at 0.1 µg/ml

**Lane 2 :** Anti-TGF beta Receptor I antibody (ab121024) at 0.03 µg/ml

**Lane 1 :** Rat liver lysate in RIPA buffer

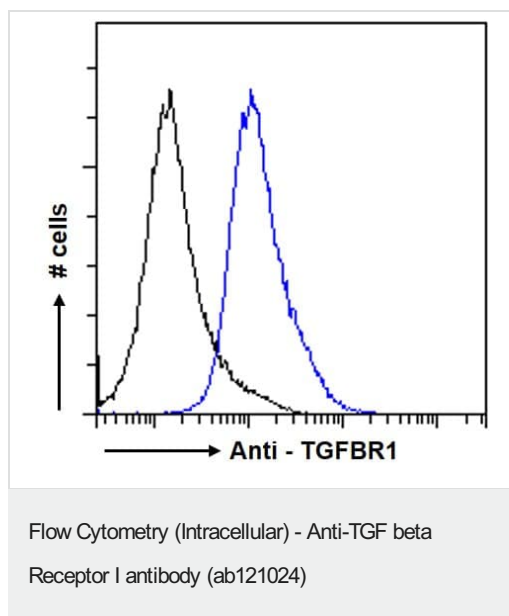
**Lane 2 :** Rat lung lysate in RIPA buffer

Lysates/proteins at 35 µg per lane.

**Predicted band size:** 55 kDa

**Observed band size:** 55 kDa

Primary incubation 1 hour at room temperature. Detected by chemiluminescence.



Flow cytometric (Intracellular) 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) followed by Alexa Fluor 488 secondary antibody.

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