Datasheet for ABIN671256

anti-TGF beta Receptor 1 (AA 301-400) antibody

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Overview

Quantity:	100 µL
Target:	TGF beta Receptor 1
Binding Specificity:	AA 301-400
Reactivity:	Cow, Human, Mouse, Rat
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	Un-conjugated
Application:	Immunofluorescence (Cultured Cells) (IF (cc)), Immunofluorescence (Paraffin-embedded Sections) (IF (p)), Immunohistochemistry (Paraffin-embedded Sections) (IHC (p)), Western Blotting (WB), Immunohistochemistry (Frozen Sections) (IHC (fro)), ELISA

Product Details

Immunogen:	KLH conjugated synthetic peptide derived from human TGF-beta R1
Isotype:	IgG
Cross-Reactivity:	Cow, Human, Mouse, Rat
Predicted Reactivity:	Cow
Purification:	Purified by Protein A.

Target Details

Target:	TGF beta Receptor 1

Target Details

Background:	Synonyms: AAT5, ALK5, ESS1, LDS1, MSSE, SKR4, ALK-5, LDS1A, LDS2A, TGFR-1, ACVRLK4, TGF-beta receptor type-1, Activin A receptor type II-like protein kinase of 53kD, Activin receptor-like kinase 5, Serine/threonine-protein kinase receptor R4, TGF-beta type I receptor, Transforming growth factor-beta receptor type I, TGF-beta receptor type I, TbetaR-I, TGFBR1 Background: 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.
Gene ID:	7046
UniProt:	P36897

Application Details

Application Notes:	WB 1:300-5000
	ELISA 1:500-1000
	IHC-P 1:200-400
	IHC-F 1:100-500
	IF(IHC-P) 1:50-200
	IF(IHC-F) 1:50-200
	IF(ICC) 1:50-200

Restrictions:	For Research Use only

Handling

Format:	Liquid
Concentration:	1 μg/μL
Buffer:	0.01M TBS(pH 7.4) with 1 % BSA, 0.02 % Proclin300 and 50 % Glycerol.
Preservative:	ProClin
Precaution of Use:	This product contains ProClin: a POISONOUS AND HAZARDOUS SUBSTANCE, which should be handled by trained staff only.
Storage:	4 °C,-20 °C
Storage Comment:	Shipped at 4°C. Store at -20°C for one year. Avoid repeated freeze/thaw cycles.
Expiry Date:	12 months

Publications

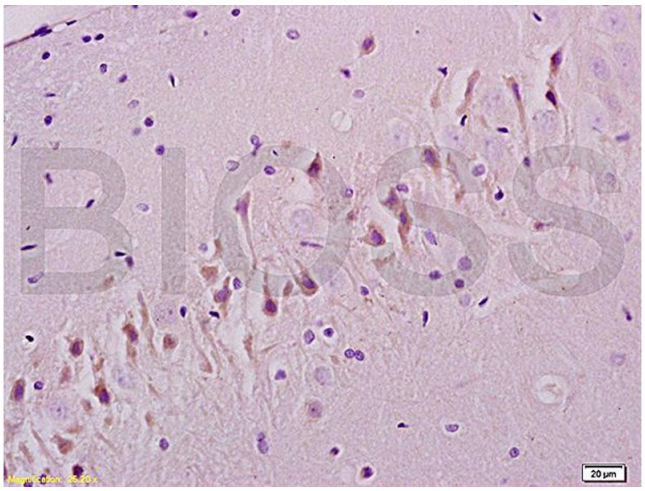
Product cited in:

Tang, Wang, Jin, Yang, Yang: "GDF9 affects the development and tight junction functions of immature bovine Sertoli cells." in: **Reproduction in domestic animals = Zuchthygiene**, Vol. 52, Issue 4, pp. 640-648, (2017) (PubMed).

Xie, Chen, Miao, Tang, Fu: "Regulation of cellular behaviors of fibroblasts related to wound healing by sol-gel derived bioactive glass particles." in: **Journal of biomedical materials research. Part A**, Vol. 104, Issue 10, pp. 2420-9, (2016) (PubMed).

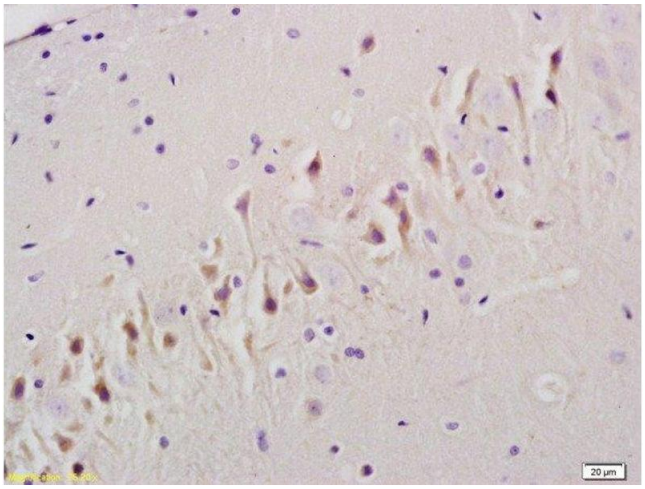
Yang, Gao, Shi, Zhou, Qu, Xu, Shan, Teng: "Effect of iodine excess on Th1, Th2, Th17, and Treg cell subpopulations in the thyroid of NOD.H-2h4 mice." in: **Biological trace element research**, Vol. 159, Issue 1-3, pp. 288-96, (2014) (PubMed).

Li, Li, Pan, Jin: "TNF-α enhances the effect of TGF-β on Gli2 expression in the KG-1 leukemic cell line." in: **Experimental and therapeutic medicine**, Vol. 8, Issue 2, pp. 676-680, (2014) (PubMed).



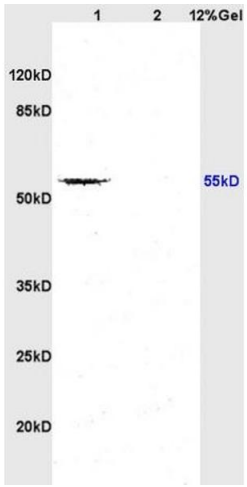
Immunohistochemistry

Image 1. Formalin-fixed and paraffin embedded rat brain tissue labeled Anti-TGF Beta R1/TGFBR1 Polyclonal Antibody, Unconjugated (ABIN671256) at 1:200, followed by conjugation to the secondary antibody and DAB staining



Immunohistochemistry (Paraffin-embedded Sections)

Image 2. Formalin-fixed and paraffin embedded rat brain tissue labeled Anti-TGF Beta R1/TGFBR1 Polyclonal Antibody, Unconjugated at 1:200, followed by conjugation to the secondary antibody and DAB staining



SDS-PAGE

Image 3. L1 rat brain lysates L2 mouse embryo lysates probed with Anti TGF Beta R1/TGFBR1 Polyclonal Antibody, Unconjugated (ABIN671256) at 1:200 overnight at 4 °C. Followed by conjugation to secondary antibody at 1:3000 for 90 min at 37 °C. Predicted band 55kD. Observed band size:55kD.

Please check the product details page for more images. Overall 4 images are available for ABIN671256.

Successfully validated (Immunohistochemistry (IHC))

by Molecular Pathology Core, University of Florida

Report Number: 029756

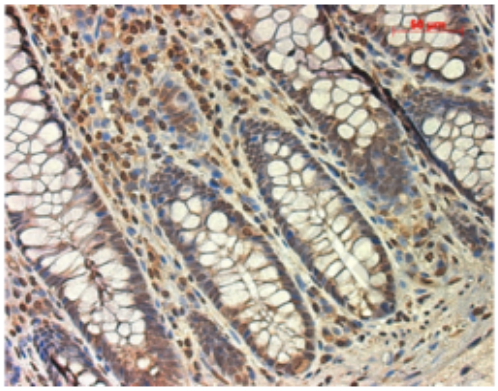
Date: Jul 03 2014

Lot Number:	130902
Method validated:	Immunohistochemistry (IHC)
Positive Control:	human normal colon, FFPE
Negative Control:	human normal adipose, FFPE
Notes:	Strong staining was observed in the positive control tissue sample. No staining was observed in the negative control tissue. Very light staining was observed in the isotype control and no staining was observed in the secondary-only control.
Primary Antibody:	- Antigen: TGF-beta Receptor I - Catalog number: ABIN671256 - Supplier: Bioss - Supplier catalog number: bs-0638R - Lot number: 130902
Secondary Antibody:	- Antigen: Mach2 rabbit HRP-Polymer - Catalog number: RHRP520L - Supplier: Biocare Medical - Lot number: 082813
Isotype:	- Antigen: Rabbit IgG control - Catalog number: I-1000 - Supplier: Vector - Lot number: T0503
Controls:	• Positive control: FFPE human colon block from CTSI Tissue Bank in University of Florida. • Negative Control: FFPE human Adipose block from CTSI Tissue Bank in University of Florida. • Secondary antibody only control: Human colon treated with Mach2 rabbit HRP-Polymer secondary antibody only. • Isotype control: FFPE human colon block from CTSI Tissue Bank in University of Florida.
Protocol:	• Human colon and human adipose (formalin fixed paraffin embedded) blocks were CTSI Tissue Bank in University of Florida. • The 4 µm thick sections were treated by Citra in steamer for 20 min and cool down on the bench for another 20 min. • Sections were blocked in sniper for 15 min at room temperature. • Sections were incubated with primary antibody diluted 1:100 in antibody diluent for 1 h at room temperature. • Sections were rinsed three times in TBS for 5 min each at RT. • Sections were incubated with Mach2 rabbit HRP-Polymer for 30 min at RT. • Sections were rinsed three times in TBS for 5 min each at RT. • DAB color develop under light microscope.

- Coverslips were mounted on slides with Cytoseal XYL (Richard-Allan Scientific)
- Stained sections were imaged with a Zeiss Axioskop2 microscope.

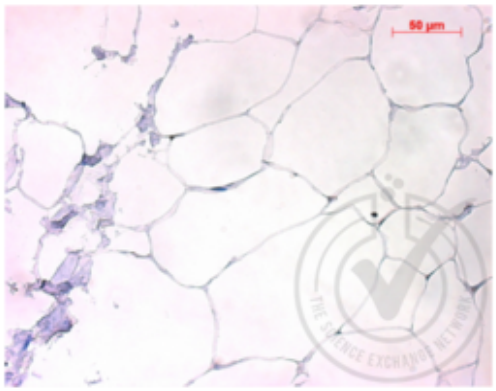
Experimental Notes:	- No experimental challenges noted.

Images for Validation report #029756



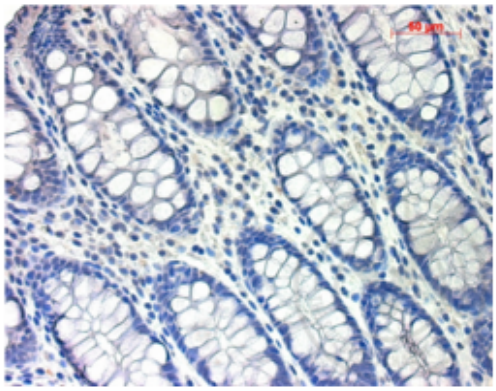
Validation image no. 1 for anti-TGF beta Receptor 1 (AA 301-400) antibody (ABIN671256)

Figure 1. Micrograph image of positive control (human colon tissue) stained with anti-TGF Beta R1 (brown staining). Scale bar = 50 µm.



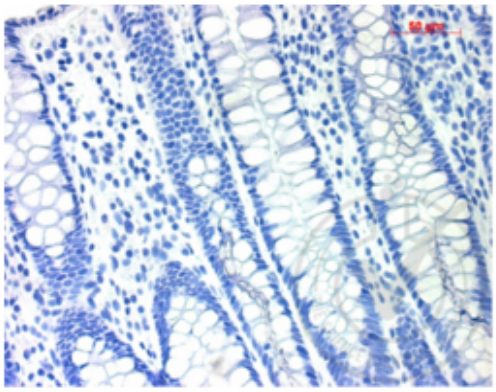
Validation image no. 2 for anti-TGF beta Receptor 1 (AA 301-400) antibody (ABIN671256)

Figure 2. Micrograph image of negative control (human adipose tissue) stained with anti-TGF Beta R1 (brown staining). Scale bar = 50 µm.



Validation image no. 3 for anti-TGF beta Receptor 1 (AA 301-400) antibody (ABIN671256)

Figure 3. Micrograph image of positive control (human colon tissue) stained with rabbit IgG isotype control antibody (brown staining). Scale bar = 50 µm.



Validation image no. 4 for anti-TGF beta Receptor 1 (AA 301-400) antibody (ABIN671256)

Figure 4. Micrograph image of positive control (human colon tissue) stained with secondary antibody only (brown staining). Scale bar = 50 µm.