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Rabbit Anti-alpha smooth muscle Actin antibody

SL0189R

Product Name:	alpha smooth muscle Actin
Chinese Name:	肌动蛋白α/α-SMA/α Actin抗体
Alias:	alpha sarcomeric Actin; alpha smooth muscle Actin; Actin alpha; ASMA; ASM-A; alpha-SMA; alpha SMA; AAT6; ACTA2; Actin alpha 2 smooth muscle aorta; Actin aortic smooth muscle; ACTSA; ACTVS; Alpha 2 actin; Alpha-actin 2; Cell growth inhibiting gene 46 protein; Growth inhibiting gene 46; ACTA_HUMAN; Actin alpha 2 smooth muscle aorta; Actin aortic smooth muscle; Actin, aortic smooth muscle; Alpha 2 actin; Alpha actin 2; Alpha cardiac actin; Alpha-actin 2; Alpha-actin-2; Cell growth inhibiting gene 46 protein; Cell growth-inhibiting gene 46 protein; Growth inhibiting gene 46; MYMY5
文献引用 PubMed :	**Specific References(10)**|SL0189R has been referenced in 10 publications. **[IF=3.61]**Xu, Zhen E., et al. "Inflammatory stress exacerbates lipid-mediated renal injury in ApoE/CD36/SRA triple knockout mice." American Journal of Physiology-Renal Physiology 301.4 (2011): F713-F722.**IHC-P;Mouse**. PubMed:21795641 **[IF=2.93]**Liu, Yang, et al. "A Simple Method for Isolating and Culturing the Rat Brain Microvascular Endothelial Cells." Microvascular Research (2013).**Rat**. PubMed:23978334 **[IF=2.89]**Waladali, Wafi, et al. "17β-Estradiol affects the proliferation and apoptosis of rat bladder neck smooth muscle cells by modulating cell cycle transition and related proteins." World journal of urology 27.2 (2009): 241-248.**Rat**. PubMed:18846379 **[IF=2.88]**Song, Jin-Ning, et al. "Potential contribution of SOCC to cerebral vasospasm after experimental subarachnoid hemorrhage in rats." Brain Research (2013).**IHC-P;Rat**.

	PubMed:23542055 [IF=2.35]Han, Xiao, Jian-xun Liu, and Xin-zhi Li. "Salvianolic acid B inhibits autophagy and protects starving cardiac myocytes." Acta Pharmacologica Sinica 32.1 (2010): 38-44.**WB;Rat**. PubMed:21113177 [IF=2.14]Lv, Ming-ming, Xin-dong Fan, and Li-xin Su. "Is a Swine Model of Arteriovenous Malformation Suitable for Human Extracranial Arteriovenous Malformation? A Preliminary Study." Cardiovascular and interventional radiology (2013): 1-7.**IHC-P;** PubMed:23652418 [IF=0.76]Guo, Jun, and Changting Liu. "Protective Effects of Telmisartan in a Rat Model of Pulmonary Arterial Hypertension." Experimental & Clinical Cardiology (2014).**IHC-P;Rat**. PubMed:0 [IF=3.73]Chen, Cheng-Hsien, et al. "MicroRNA-328 Inhibits Renal Tubular Cell Epithelial-to-Mesenchymal Transition by Targeting the CD44 in Pressure-Induced Renal Fibrosis." PloS one 9.6 (2014): e99802.**WB;Rat**. PubMed:24919189 [IF=1.94]Wang, Yiming, and Limin Liao. "Histologic and functional outcomes of small intestine submucosa-regenerated bladder tissue." BMC Urology 14.1 (2014): 69.**IHC-P;Rabbit**. PubMed:25148849 [IF=0.00]Li, Yin, Lin Xiong, and Jianping Gong. "Lyn kinase enhanced hepatic fibrosis by modulating the activation of hepatic stellate cells." Am J Transl Res 9.6 (2017): 2865-2877.**IHC-F;Mouse**. PubMed:0
Organism Species:	Rabbit
Clonality:	Polyclonal
React Species:	Human,Mouse,Rat,Chicken,Dog,Pig,Cow,Rabbit,Sheep,Fish,Guinea Pig,Hamster,Cat,HMt,Op
Applications:	WB=1:500-2000ELISA=1:500-1000Flow-Cyt=1μg /test not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Molecular weight:	42kDa
Cellular localization:	cytoplasmic

Form:	Lyophilized or Liquid
Concentration:	1mg/ml
immunogen:	KLH conjugated synthetic peptide derived from human Actin alpha:301-375/375
Lsotype:	IgG
Purification:	affinity purified by Protein A
Storage Buffer:	0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.
Storage:	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.
PubMed:	PubMed
Product Detail:	The product encoded by this gene belongs to the actin family of proteins, which are highly conserved proteins that play a role in cell motility, structure and integrity. Alpha, beta and gamma actin isoforms have been identified, with alpha actins being a major constituent of the contractile apparatus, while beta and gamma actins are involved in the regulation of cell motility. This actin is an alpha actin that is found in skeletal muscle. Mutations in this gene cause nemaline myopathy type 3, congenital myopathy with excess of thin myofilaments, congenital myopathy with cores, and congenital myopathy with fiber-type disproportion, diseases that lead to muscle fiber defects. [provided by RefSeq, Jul 2008] **Function:** Actins are highly conserved proteins that are involved in various types of cell motility and are ubiquitously expressed in all eukaryotic cells. **Subunit:** Polymerization of globular actin (G-actin) leads to a structural filament (F-actin) in the form of a two-stranded helix. Each actin can bind to 4 others. **Subcellular Location:** Cytoplasm, cytoskeleton. **Post-translational modifications:** Oxidation of Met-46 by MICALs (MICAL1, MICAL2 or MICAL3) to form methionine sulfoxide promotes actin filament depolymerization. Methionine sulfoxide is produced stereospecifically, but it is not known whether the (S)-S-oxide or the (R)-S-oxide is produced (By similarity). **DISEASE:** Note=ACTA2 mutations predispose patients to a variety of diffuse and diverse vascular diseases, premature onset coronary artery disease (CAD), premature ischemic strokes and Moyamoya disease. Defects in ACTA2 are the cause of familial aortic aneurysm thoracic type 6 (AAT6) [MIM:611788]. AATs are characterized by permanent dilation of the thoracic aorta usually due to degenerative changes in the aortic wall. They are primarily associated with a characteristic histologic appearance known as 'medial necrosis' or 'Erdheim cystic

medial necrosis' in which there is degeneration and fragmentation of elastic fibers, loss of smooth muscle cells, and an accumulation of basophilic ground substance.
Defects in ACTA2 are the cause of Moyamoya disease type 5 (MYMY5) [MIM:614042]. Moyamoya disease is a progressive cerebral angiopathy characterized by bilateral intracranial carotid artery stenosis and telangiectatic vessels in the region of the basal ganglia. The abnormal vessels resemble a 'puff of smoke' (moyamoya) on cerebral angiogram. Affected individuals can develop transient ischemic attacks and/or cerebral infarction, and rupture of the collateral vessels can cause intracranial hemorrhage. Hemiplegia of sudden onset and epileptic seizures constitute the prevailing presentation in childhood, while subarachnoid bleeding occurs more frequently in adults.
Defects in ACTA2 are the cause of multisystemic smooth muscle dysfunction syndrome (MSMDYS) [MIM:613834]. MSMDYS is a syndrome characterized by dysfunction of smooth muscle cells throughout the body, leading to aortic and cerebrovascular disease, fixed dilated pupils, hypotonic bladder, malrotation, and hypoperistalsis of the gut and pulmonary hypertension.

Similarity:
Belongs to the actin family.

SWISS:
P62736

Gene ID:
59

Database links:
Entrez Gene: 101021287Baboon

Entrez Gene: 515610Cow

Entrez Gene: 59Human

Entrez Gene: 11475Mouse

Entrez Gene: 733615Pig

Entrez Gene: 100009271Rabbit

Entrez Gene: 81633Rat

Omim: 102620Human

SwissProt: P62739Cow

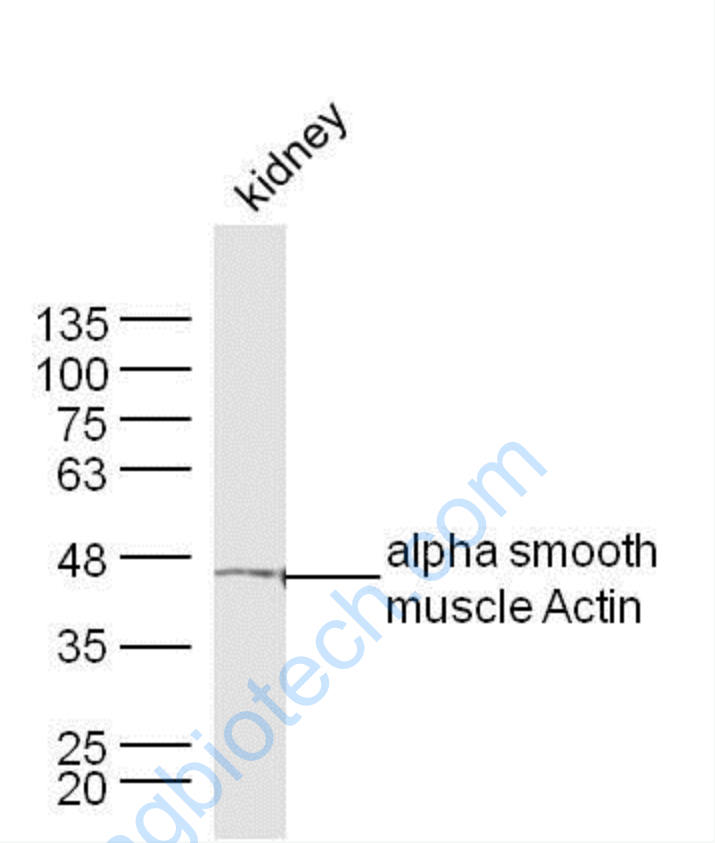
SwissProt: P62736Human

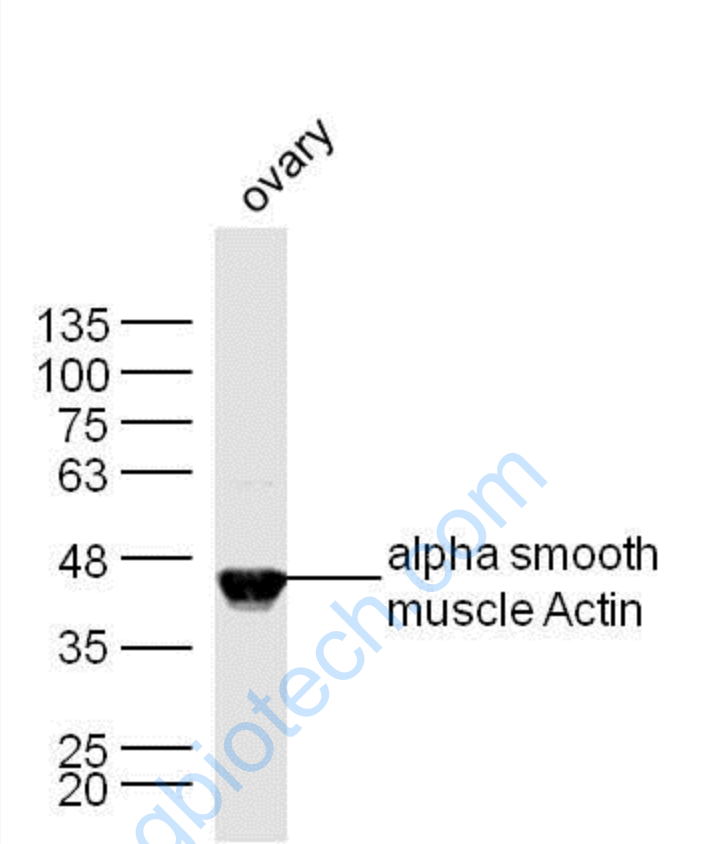
SwissProt: P62737Mouse

SwissProt: P62740Rabbit

SwissProt: P62738Rat

	Unigene: 500483Human Unigene: 213025Mouse Unigene: 195319Rat Unigene: 3114Rat **Important Note:** This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications. 结构蛋白(Structural Proteins) Actin α/α-Actin 是一种具有收缩能力的微丝蛋白，a-SMA广泛分布于几乎所有的肌型细胞中。Actin-α蛋白主要用于检测骨骼肌、平滑肌、血管平滑肌、心肌和肌原性Tumour包括：平滑肌瘤、平滑肌肉瘤、横纹肌肉瘤以及肌上细胞和肌上皮瘤。Actin(肌动蛋白)是在所有真核细胞中都表达的高度保守的蛋白质。它们沿微管组成了Cytoskeleton的主要成分。肌动蛋白至少表达为6种异构形式。它在心脏、骨骼横纹肌组织和某些平滑肌组织中表达，调节其收缩功能。有报导说肌动蛋白在乳房瘤中是高度磷酸化的。肌动蛋白的功能失调也会导致某种类型的心脏病。平滑肌α肌动蛋白使人更感兴趣，因为编码它的基因是相对局限于在血管平滑肌细胞中表达的少数几个基因之一。肌动蛋白是标记平滑肌和肌epithelial cellsTumour的有效工具。

Picture:	 Sample:Kidney (Mouse) Lysate at 40 ug Primary: Anti- alpha-SMA (SL0189R) at 1/300 dilution Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution Predicted band size: 42 kD Observed band size: 42 kD



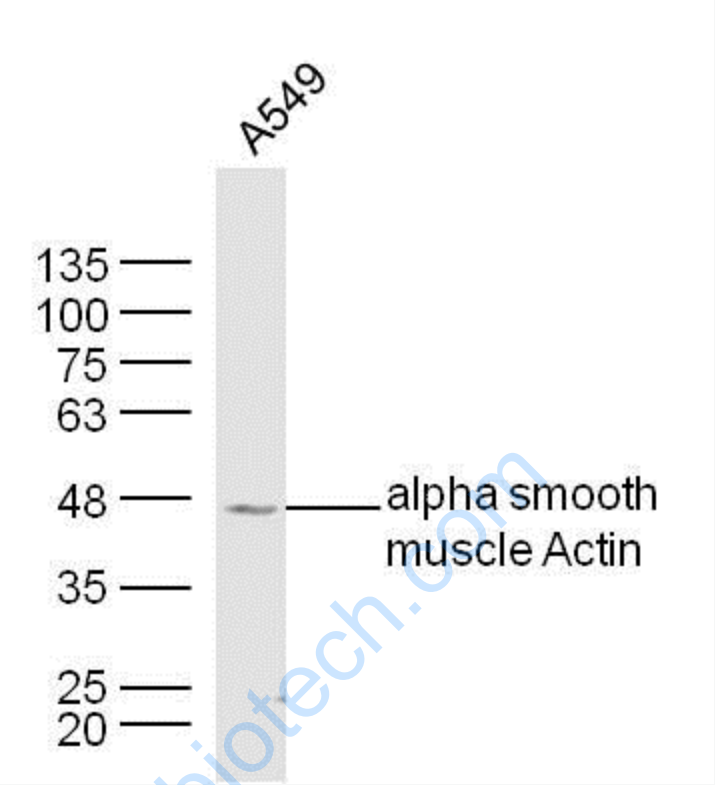
Sample:Ovary (Mouse) Lysate at 40 ug

Primary: Anti-alpha-SMA (SL0189R) at 1/300 dilution

Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

Predicted band size: 42 kD

Observed band size: 42 kD



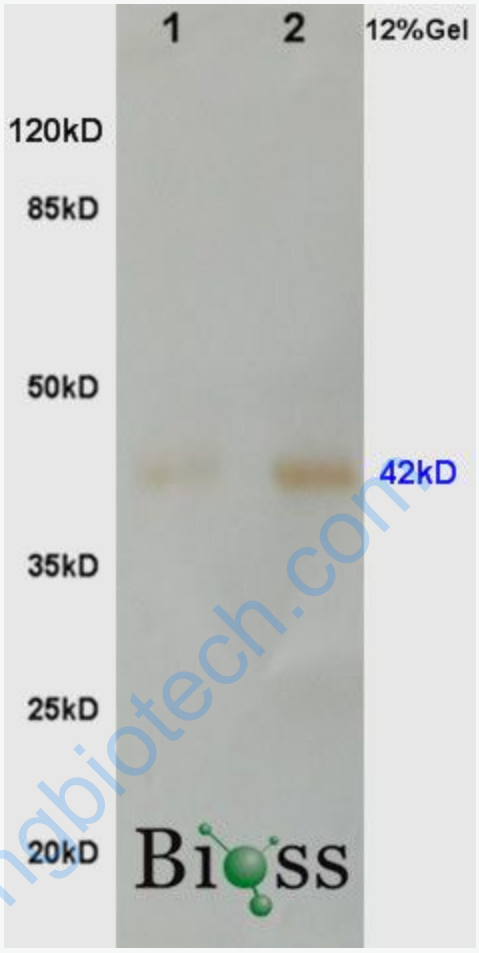
Sample: A549(Human) Lysate at 40 ug

Primary: Anti- alpha-SMA (SL0189R) at 1/300 dilution

Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

Predicted band size: 42 kD

Observed band size: 42 kD



Sample:

Brain (Rat) Lysate at 40 ug

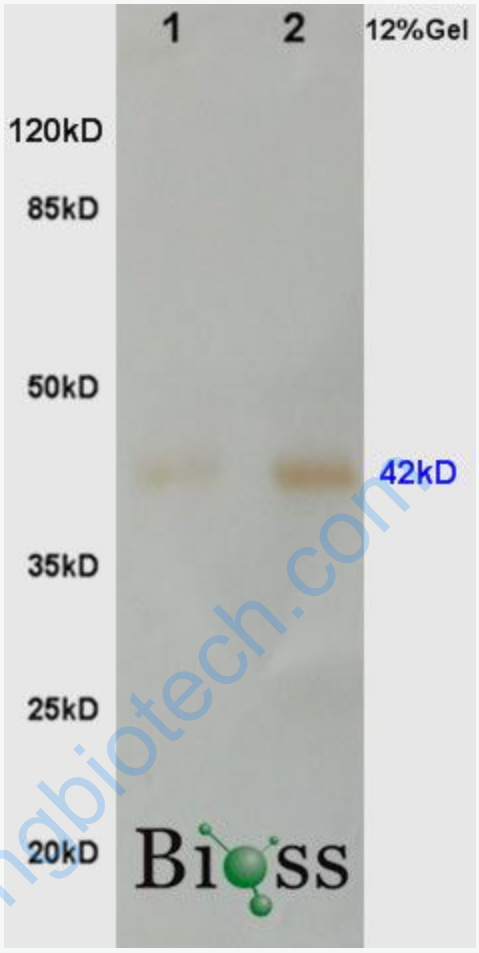
Kidney (Rat) Lysate at 40 ug

Primary: Anti-alpha-SMA(SL0189R) at 1/300 dilution

Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

Predicted band size: 42 kD

Observed band size: 42 kD



Sample:

Brain (Rat) Lysate at 40 ug

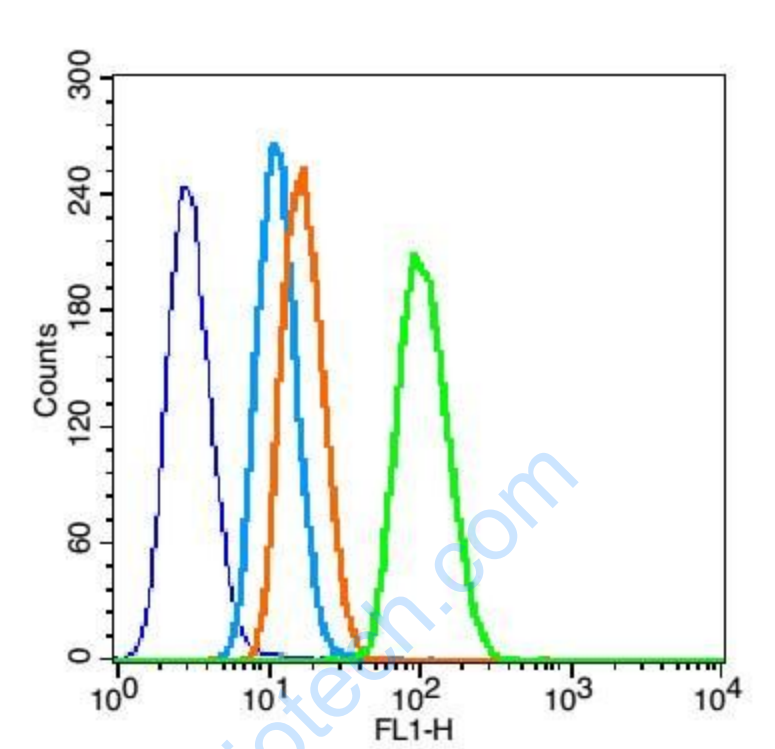
Kidney (Rat) Lysate at 40 ug

Primary: Anti- alpha-SMA (SL0189R) at 1/300 dilution

Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

Predicted band size: 42 kD

Observed band size: 42 kD



Blank control (blue line): Hela (blue).

Primary Antibody (green line): Rabbit Anti-alpha smooth muscle Actin antibody (SL0189R)

Dilution: 1μg /10^6 cells;

Isotype Control Antibody (orange line): Rabbit IgG .

Secondary Antibody (white blue line): Goat anti-rabbit IgG-FITC

Dilution: 1μg /test.

Protocol

The cells were fixed with 80% methanol (5 min at -20℃) and then permeabilized with 0.1% PBS-Tween for 20 min at room temperature. Cells stained with Primary Antibody for 30 min at room temperature. The cells were then incubated in 1 X PBS/2%BSA/10% goat serum to block non-specific protein-protein interactions

	followed by the antibody for 15 min at room temperature. The secondary antibody used for 40 min at room temperature. Acquisition of 20,000 events was performed.