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Rabbit Anti-GAPDH-Loading Control antibody

SL10900R

Product Name:	GAPDH-Loading Control
Chinese Name:	3-磷酸甘油醛脱氢酶抗体
Alias:	38 kDa BFA-dependent ADP-ribosylation substrate; Aging-associated gene 9 protein; BARS-38; cb609; EC 1.2.1.12; G3PD; G3PDH; GAPD; Glyceraldehyde 3 phosphate dehydrogenase;Glyceraldehyde 3 phosphate dehydrogenase liver;Glyceraldehyde 3 phosphate dehydrogenase muscle; KNC-NDS6; MGC102544; MGC102546; MGC103190; MGC103191; MGC105239; MGC127711; MGC88685; OCAS, p38 component; OCT1 coactivator in S phase, 38-KD component; wu:fb33a10.
Organism Species:	Rabbit
Clonality:	Polyclonal
React Species:	Human,Mouse,Rat,
Applications:	WB=1:5000-10000IHC-P=1:400-800IHC-F=1:400-800ICC=1:100-500IF=1:100-500（Paraffin sections need antigen repair） not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Molecular weight:	38kDa
Cellular localization:	The nucleuscytoplasmicThe cell membrane
Form:	Lyophilized or Liquid
Concentration:	1mg/ml
immunogen:	Recombinant human GAPDH full length protein:
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:	Glyceraldehyde 3 phosphate dehydrogenase (GAPDH) is well known as one of the key

	enzymes involved in glycolysis. As well as functioning as a glycolytic enzyme in cytoplasm, recent evidence suggests that mammalian GAPDH is also involved in a great number of intracellular proceses such as membrane fusion, microtubule bundling, phosphotransferase activity, nuclear RNA export, DNA replication, and DNA repair. During the last decade a lot of data appeared concerning the role of GAPDH in different pathologies including prostate cancer progression, programmed neuronal cell death, age related neuronal diseases, such as Alzheimer's and Huntington's disease. GAPDH is expressed in all cells. It is constitutively expressed in almost all tissues at high levels. There are however some physiological factors such as hypoxia and diabetes that increase GAPDH expression in certain cell types. GAPDH molecule is composed of four 36kDa subunits. **Function:** Has both glyceraldehyde-3-phosphate dehydrogenase and nitrosylase activities, thereby playing a role in glycolysis and nuclear functions, respectively. Participates in nuclear events including transcription, RNA transport, DNA replication and apoptosis. Nuclear functions are probably due to the nitrosylase activity that mediates cysteine S-nitrosylation of nuclear target proteins such as SIRT1, HDAC2 and PRKDC. Glyceraldehyde-3-phosphate dehydrogenase is a key enzyme in glycolysis that catalyzes the first step of the pathway by converting D-glyceraldehyde 3-phosphate (G3P) into 3-phospho-D-glyceroyl phosphate. **Subunit:** Homotetramer. Interacts with TPPP; the interaction is direct. Interacts (when S-nitrosylated) with SIAH1; leading to nuclear translocation. Interacts with RILPL1/GOSPEL, leading to prevent the interaction between GAPDH and SIAH1 and prevent nuclear translocation. Interacts with EIF1AD, USP25, PRKCI and WARS. **Subcellular Location:** Cytoplasm, cytosol. Nucleus. Cytoplasm, perinuclear region. Membrane. Note=Translocates to the nucleus following S-nitrosylation and interaction with SIAH1, which contains a nuclear localization signal. Postnuclear and Perinuclear regions. **Post-translational modifications:** S-nitrosylation of Cys-152 leads to interaction with SIAH1, followed by translocation to the nucleus. ISGylated (Probable). Sulfhydration at Cys-152 increases catalytic activity. **Similarity:** Belongs to the glyceraldehyde-3-phosphate dehydrogenase family. **SWISS:** P04406 **Gene ID:**

2597

Database links:

Entrez Gene: 374193Chicken

Entrez Gene: 2597Human

Entrez Gene: 100042025Mouse

Entrez Gene: 14433Mouse

Entrez Gene: 24383Rat

Entrez Gene: 685186Rat

Entrez Gene: 317743Zebrafish

Omim: 138400Human

SwissProt: P00356Chicken

SwissProt: P04406Human

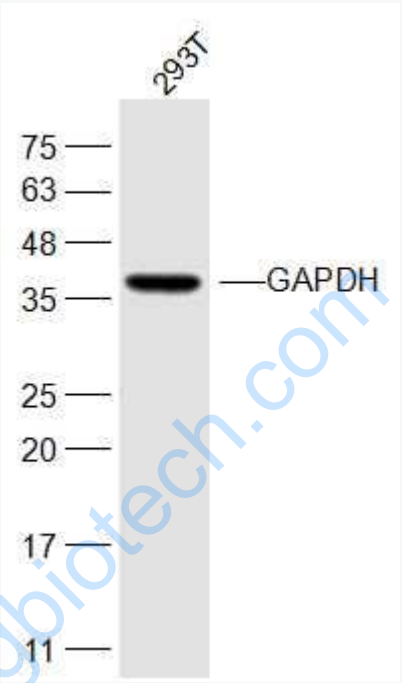
SwissProt: P16858Mouse

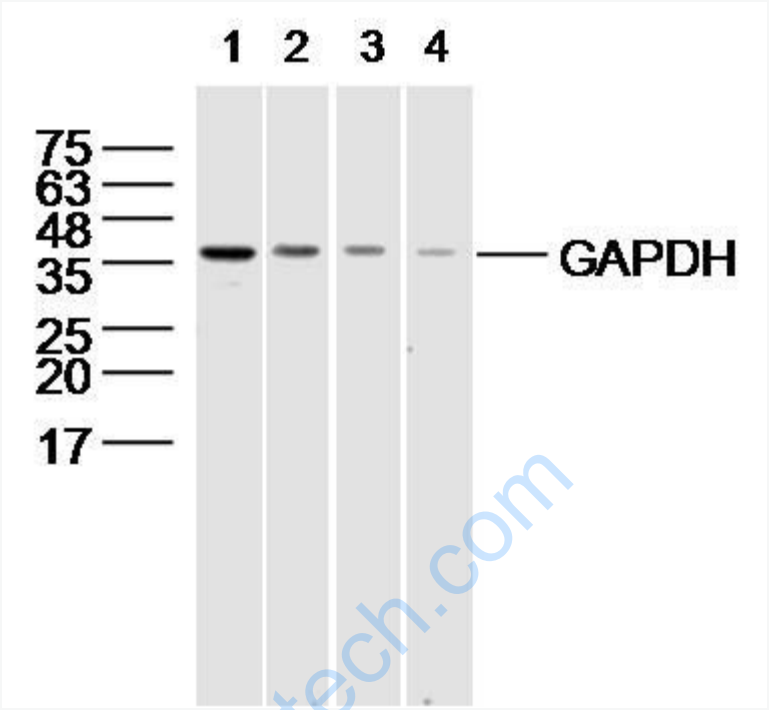
SwissProt: P04797Rat

SwissProt: Q5XJ10Zebrafish

Important Note:
This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

GAPDH蛋白几乎在所有组织中都高水平表达，广泛用作Western blot蛋白质标准化的内参,是很好的内参抗体。
GAPDH作为管家基因在同种细胞或者组织中的蛋白质表达量一般是恒定的。在实验中，可能存在总蛋白浓度测定不准确；或者蛋白质样品在电泳前上样时产生的样品间的操作误差；这些误差需要通过测定每个样品中实际转到膜上的GAPDH的含量来进行校正，所以一般的western实验都需要进行内参设置。具体校正的方法就是将每个样品测得的目的蛋白含量与本样品的GAPDH含量相除，得到每个样品目的蛋白的相对含量。然后才进行样品与样品之间的比较。
甘油醛-3-磷酸脱氢酶（Glyceraldehyde 3 phosphate dehydrogenase，GAPDH）是糖酵解（glycolysis）过程中的关键酶。除了在胞质中作为糖酵解的酶以外，有证据表明哺乳动物细胞中的GAPDH参与了多种胞内生化过程，包括膜融合（membrane fusion）、微管成束（microtubule bundling）、磷酸转移酶（phosphotransferase）激活、核内RNA出核、DNA复制与DNA

	修复。一些生理因素，诸如低氧(hypoxia)和尿糖(diabetes)，可以增加GAPDH在特定细胞中的表达。GAPDH存在于几乎所有的组织中，以高水平持续表达。 GAPDH(甘油醛-3- 磷酸脱氢酶)是参与糖酵解的一种关键酶，由4个30－40kDa的亚基组成.
Picture:	 Sample: 293T(Human) Cell Lysate at 30 ug Primary: Anti-GAPDH (SL10900R) at 1/1000 dilution Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution Predicted band size: 38 kD Observed band size: 38 kD



Sample: 293T(human) cell lysate at 30ug;

Primary:

Lane1: Anti-GAPDH (SL10900R) at 1/2000 dilution

Lane2: Anti-GAPDH (SL10900R) at 1/10000 dilution

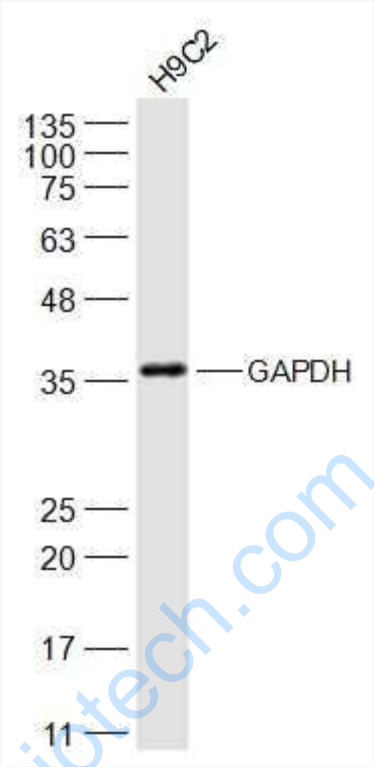
Lane3: Anti-GAPDH (SL10900R) at 1/40000 dilution

Lane4: Anti-GAPDH (SL10900R) at 1/80000 dilution

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

Predicted band size: 38 kD

Observed band size: 38kD



Sample:

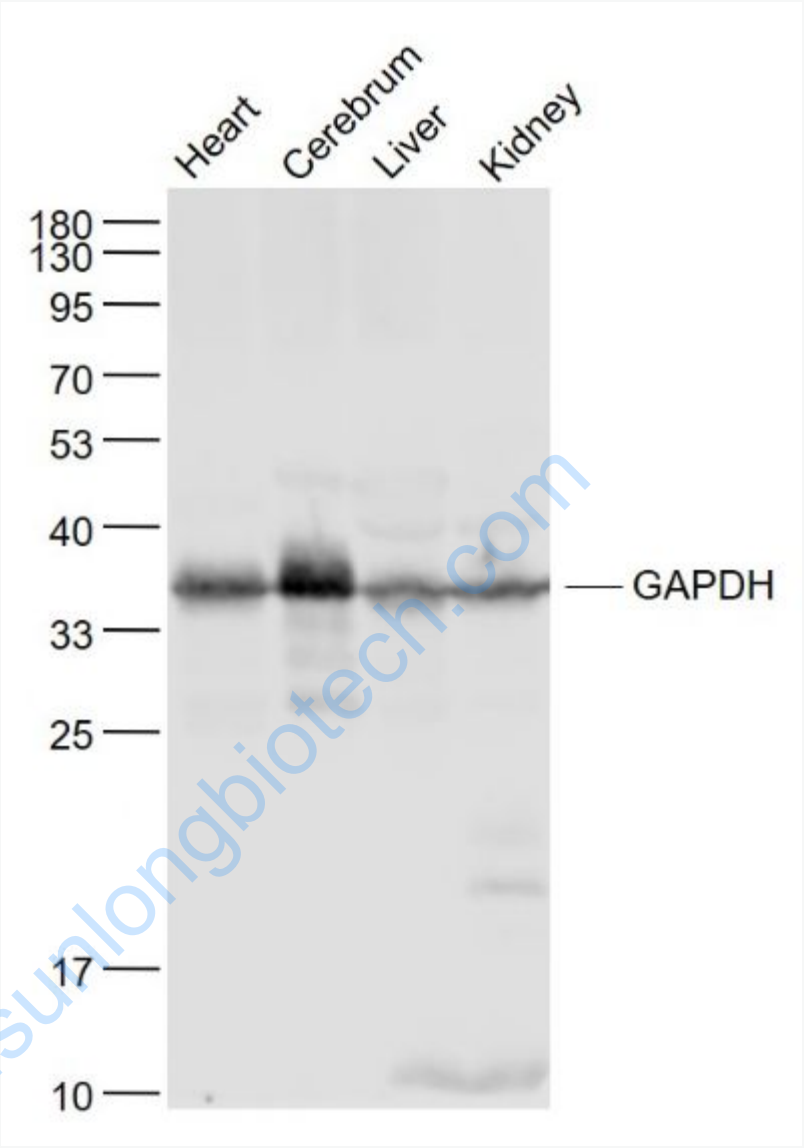
H9C2(Rat) Cell Lysate at 30 ug

Primary: Anti-GAPDH (SL10900R) at 1/2000 dilution

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

Predicted band size: 38 kD

Observed band size: 38 kD



Sample:

Heart (Mouse) Lysate at 40 ug

Cerebrum (Mouse) Lysate at 40 ug

Liver (Mouse) Lysate at 40 ug

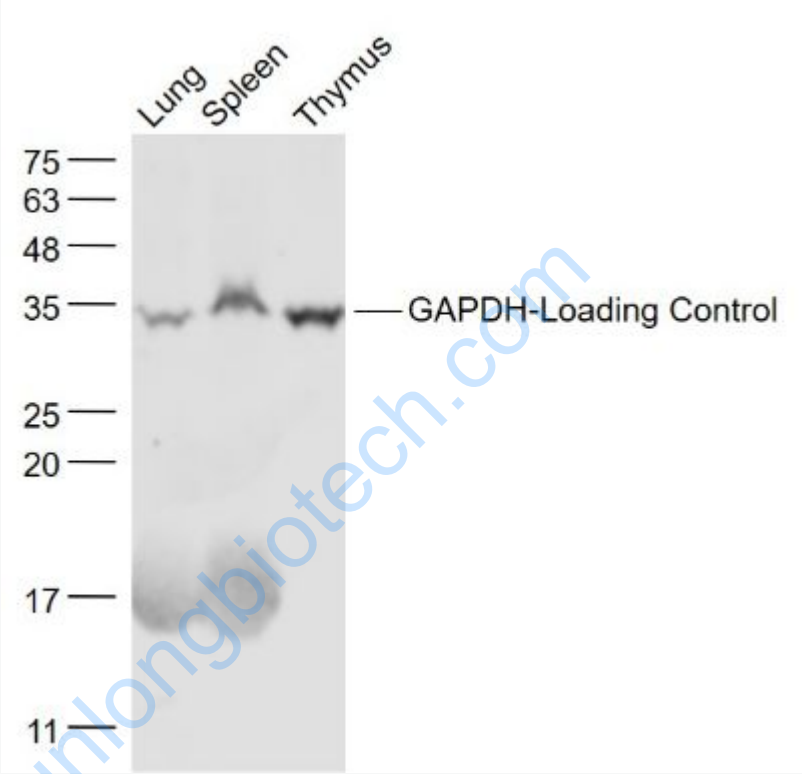
Kidney (Mouse) Lysate at 40 ug

Primary: Anti- GAPDH (SL10900R) at 1/1000 dilution

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

Predicted band size: 38 kD

Observed band size: 38 kD



Sample:

Lung (Mouse) Lysate at 40 ug

Spleen (Mouse) Lysate at 40 ug

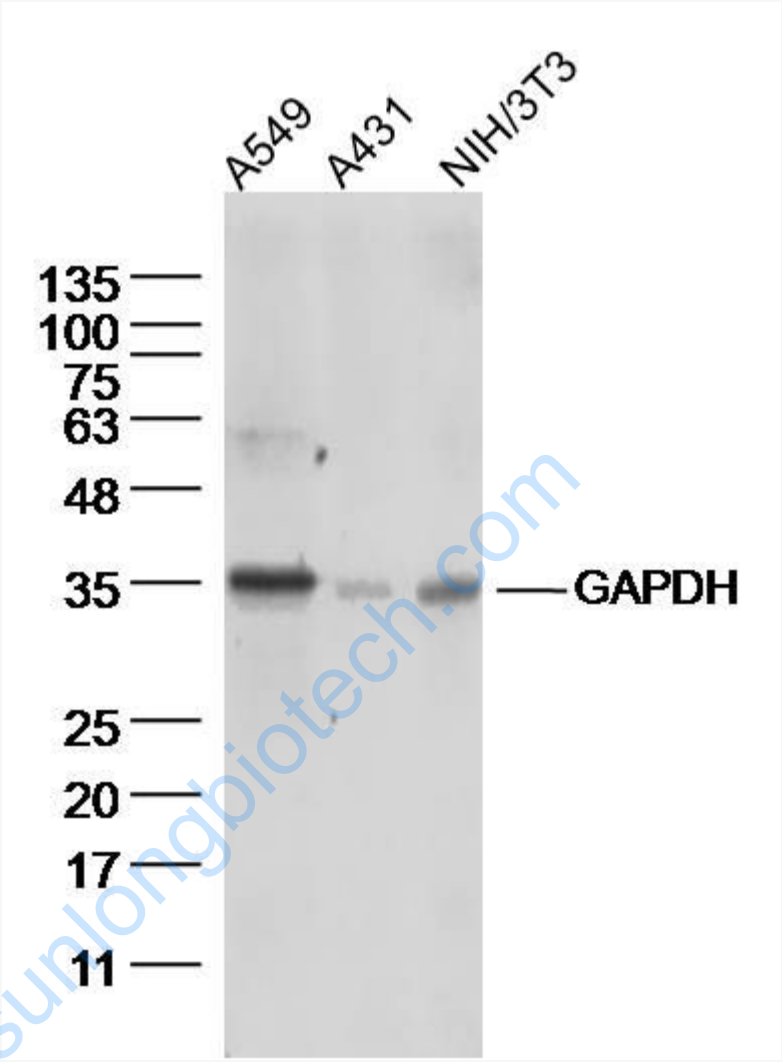
Thymus (Mouse) Lysate at 40 ug

Primary: Anti- GAPDH-Loading Control (SL10900R) at 1/1000 dilution

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

Predicted band size: 38 kD

Observed band size: 35 kD



Sample:

A549 Cell (Human) Lysate at 40 ug

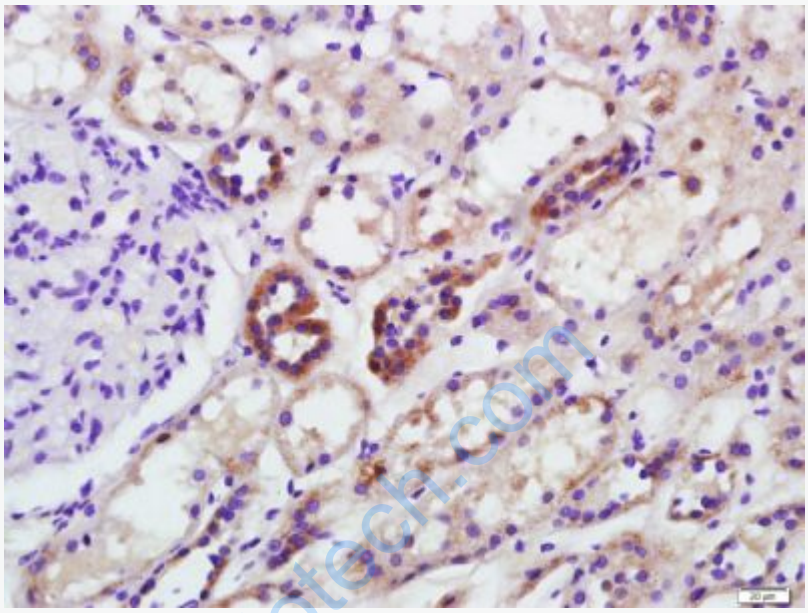
A431 Cell (Human) Lysate at 40 ug

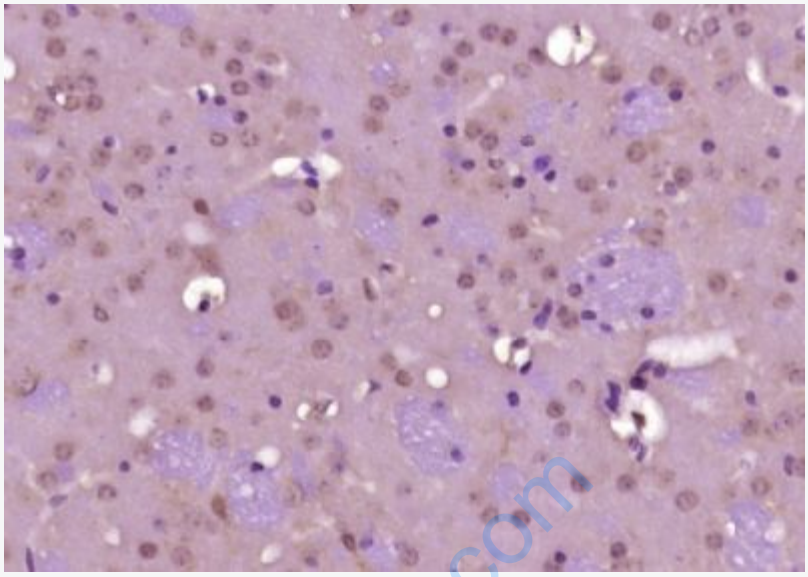
NIH/3T3 Cell (Mouse) Lysate at 40 ug

Primary: Anti-GAPDH (SL10900R) at 1/300 dilution

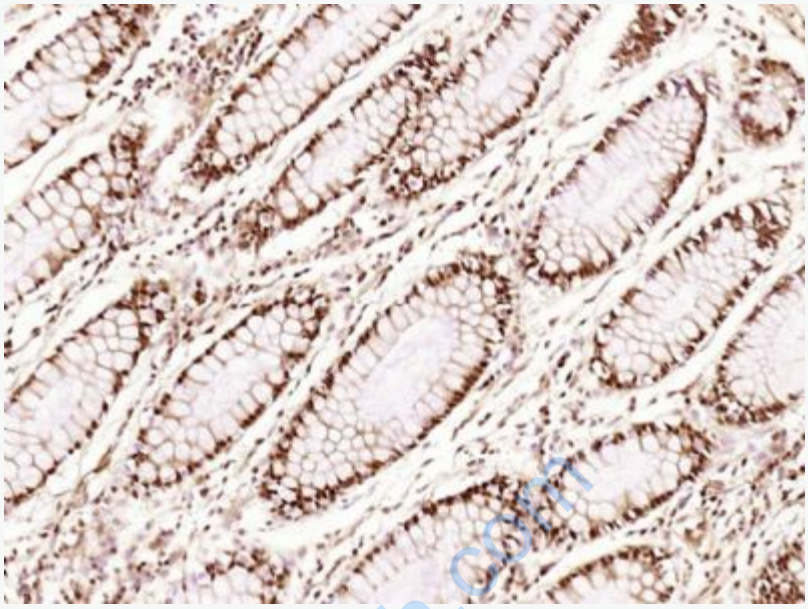
Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

Predicted band size: 38 kD

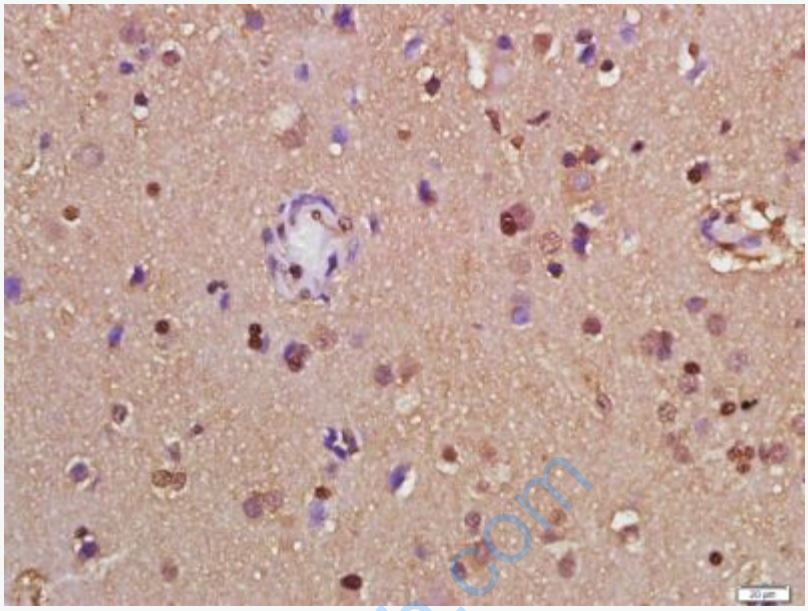
	Observed band size: 36 kD  Paraformaldehyde-fixed, paraffin embedded (Human kidney); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (GAPDH) Polyclonal Antibody, Unconjugated (SL10900R) at 1:2000 overnight at 4°C, followed by a conjugated secondary (sp-0023) for 20 minutes and DAB staining.



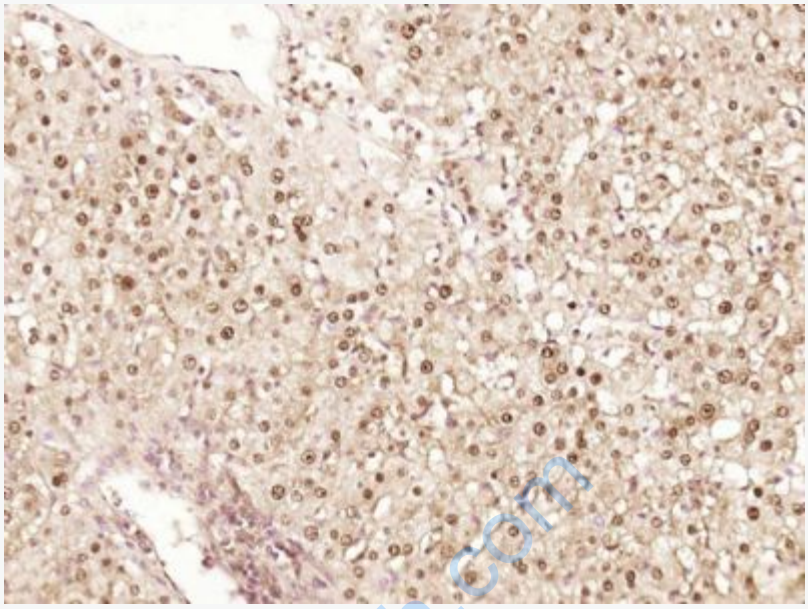
Paraformaldehyde-fixed, paraffin embedded (mouse brain tissue); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (GAPDH-Loading Contro) Polyclonal Antibody, Unconjugated (SL10900R) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructionsand DAB staining.



Paraformaldehyde-fixed, paraffin embedded (Human colon carcinoma); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (GAPDH) Polyclonal Antibody, Unconjugated (SL10900R) at 1:500 overnight at 4°C, followed by a conjugated secondary (sp-0023) for 20 minutes and DAB staining.



Paraformaldehyde-fixed, paraffin embedded (Human glioma); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (GAPDH) Polyclonal Antibody, Unconjugated (SL10900R) at 1:500 overnight at 4°C, followed by a conjugated secondary (sp-0023) for 20 minutes and DAB staining.



Paraformaldehyde-fixed, paraffin embedded (Human liver cancer); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (GAPDH) Polyclonal Antibody, Unconjugated (SL10900R) at 1:500 overnight at 4°C, followed by a conjugated secondary (sp-0023) for 20 minutes and DAB staining.