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Rabbit Anti-HSP27 antibody

SL0730R

Product Name	HSP27
Chinese Name	热休克蛋白 27/HSP25 抗体
Alias	Heat shock 27kDa protein; 28 kDa heat shock protein; CMT2F; DKFZp586P1322; Estrogen regulated 24 kDa protein; Estrogen-regulated 24 kDa protein; Heat shock 25kDa protein 1; Heat shock 25kDa protein 1; Heat shock 27 kDa protein; Heat shock 27kD protein 1; Heat shock 27kDa protein 1; Heat shock 27kDa protein 1; Heat shock 28kDa protein 1; Heat shock 28kDa protein 1; Heat Shock Protein 27; Heat Shock Protein 27; Heat shock protein beta 1; Heat shock protein beta-1; Heat Shock Protein27; Heat Shock Protein27; HMN2B; HS.76067; Hsp 25; Hsp 25; Hsp 27; Hsp 27; Hsp 28; Hsp 28; Hsp B1; Hsp B1; Hsp25; Hsp25; Hsp28; Hsp28; HspB1; HspB1; HSPB1_HUMAN; SRP27; Stress responsive protein 27; Stress-responsive protein 27.
Research Area	Tumour immunology Signal transduction
Immunogen Species	Rabbit
Clonality	Polyclonal
React Species	Human, Mouse, Rat, (predicted: Dog, Pig, Cow,)
Applications	WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500,Flow-Cyt=2μg/Test （Paraffin sections need antigen repair） not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Theoretical molecular weight	27kDa
Cellular localization	The nucleus cytoplasmic
Form	Liquid
Concentration	1mg/ml
immunogen	KLH conjugated synthetic peptide derived from human HSP27: 101-205/205
Lsotype	IgG
Purification	affinity purified by Protein A
Buffer	1M TBS(pH7.4) with 1% BSA, 3% Proclin300 and 50% Glycerol.

Solution

Storage Shipped at 4℃. Store at -20 °C for one year. Avoid repeated freeze/thaw cycles.

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

PubMed PubMed

The protein encoded by this gene is induced by environmental stress and developmental changes. The encoded protein is involved in stress resistance and actin organization and translocates from the cytoplasm to the nucleus upon stress induction. Defects in this gene are a cause of Charcot-Marie-Tooth disease type 2F (CMT2F) and distal hereditary motor neuropathy (dHMN). [provided by RefSeq, Oct 2008]

Function:
Involved in stress resistance and actin organization.

Subunit:
Interacts with TGFB1I1. Associates with alpha- and beta-tubulin, microtubules and CRYAB. Interacts with HSPB8 and HSPBAP1.

Subcellular Location:
Cytoplasm. Nucleus. Cytoplasm, cytoskeleton, spindle. Note=Cytoplasmic in interphase cells. Colocalizes with mitotic spindles in mitotic cells. Translocates to the nucleus during heat shock and resides in sub-nuclear structures known as SC35 speckles or nuclear splicing speckles.

Product Detail

Tissue Specificity:
Detected in all tissues tested: skeletal muscle, heart, aorta, large intestine, small intestine, stomach, esophagus, bladder, adrenal gland, thyroid, pancreas, testis, adipose tissue, kidney, liver, spleen, cerebral cortex, blood serum and cerebrospinal fluid. Highest levels are found in the heart and in tissues composed of striated and smooth muscle.

Post-translational modifications:
Phosphorylated in MCF-7 cells on exposure to protein kinase C activators and heat shock. Phosphorylation by MAPKAPK2 and MAPKAPK3 in response to stress leads to dissociate HSP27/HSPB1 from large small heat-shock protein (sHsps) oligomers and impair its chaperone activity and ability to protect against oxidative stress effectively. Phosphorylation by MAPKAPK5 in response to PKA stimulation induces F-actin rearrangement.

DISEASE:
Defects in HSPB1 are the cause of Charcot-Marie-Tooth disease type 2F (CMT2F) [MIM:606595]. CMT2F is a form of Charcot-Marie-Tooth disease, the most common inherited disorder of the peripheral nervous system. Charcot-Marie-Tooth disease is classified in two main groups on the basis of electrophysiologic properties and

histopathology: primary peripheral demyelinating neuropathy or CMT1, and primary peripheral axonal neuropathy or CMT2. Neuropathies of the CMT2 group are characterized by signs of axonal regeneration in the absence of obvious myelin alterations, normal or slightly reduced nerve conduction velocities, and progressive distal muscle weakness and atrophy. Nerve conduction velocities are normal or slightly reduced. CMT2F onset is between 15 and 25 years with muscle weakness and atrophy usually beginning in feet and legs (peroneal distribution). Upper limb involvement occurs later. CMT2F inheritance is autosomal dominant.
Defects in HSPB1 are a cause of distal hereditary motor neuronopathy type 2B (HMN2B) [MIM:608634]. Distal hereditary motor neuronopathies constitute a heterogeneous group of neuromuscular disorders caused by selective impairment of motor neurons in the anterior horn of the spinal cord, without sensory deficit in the posterior horn. The overall clinical picture consists of a classical distal muscular atrophy syndrome in the legs without clinical sensory loss. The disease starts with weakness and wasting of distal muscles of the anterior tibial and peroneal compartments of the legs. Later on, weakness and atrophy may expand to the proximal muscles of the lower limbs and/or to the distal upper limbs.

Similarity:
Belongs to the small heat shock protein (HSP20) family.

SWISS:
P04792

Gene ID:
3315

Database links:

Entrez Gene: 3315 Human

Entrez Gene: 15507 Mouse

Entrez Gene: 24471 Rat

Entrez Gene: 403979 Dog

Omim: 602195 Human

SwissProt: P42929 Dog

SwissProt: P04792 Human

SwissProt: P14602 Mouse

SwissProt: P42930 Rat

Unigene: 3849 Dog

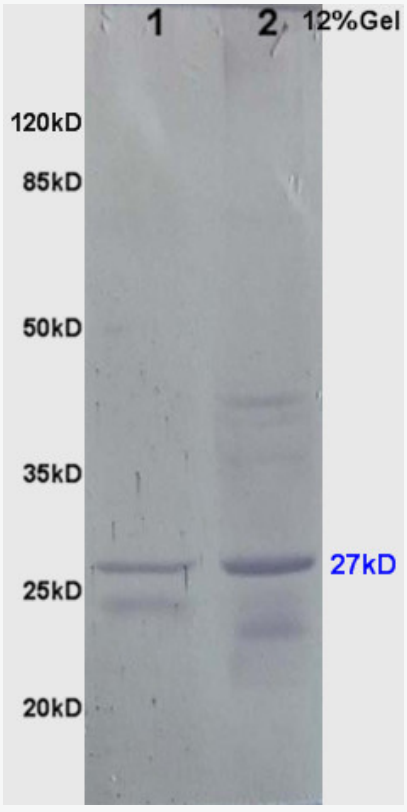
Unigene: 520973 Human

Unigene: 13849 Mouse

Unigene: 3841 Rat

信号传导（Signaling Intermediates）
适用组织：石蜡切片 Cellular localization：胞浆和部分胞核
HSPs 是细胞受应激原刺激后诱导产生的一组应激蛋白，与 Tumour 发生、 增殖及分化有关。按其分子量不同可分为 3 种类型，每组的 HSPs 的分布及功能有所不同。热休克蛋白 27 是人体中最常见而又最小的热休克蛋白。HSP27 和其它 HSPs 可能与 Tumour 耐药和 Tumour 的分化程度以及病人的预后有关。

Product Picture



Sample:

Brain(Mouse) lysate at 30ug;

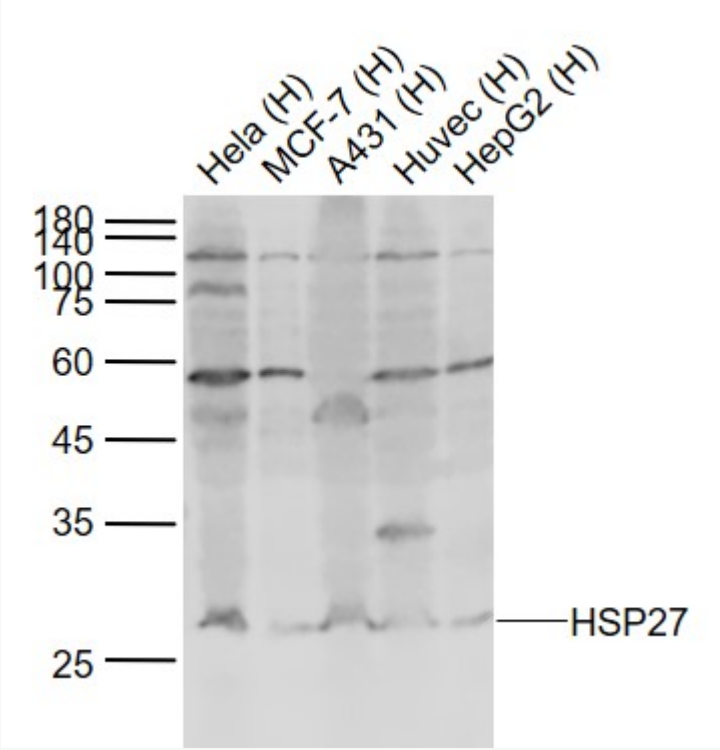
Liver(Mouse) lysate at 30ug;

Primary: Anti-HSP-27 (SL0730R) at 1:200;

Secondary: AP conjugated Goat Anti-Rabbit IgG(SL0295G-AP) at 1: 3000 dilutionNBT/BCIP staining;

Predicted band size : 27kD

Observed band size : 27kD



Sample:

Lane 1: Hela (Human) Cell Lysate at 30 ug

Lane 2: MCF-7 (Human) Cell Lysate at 30 ug

Lane 3: A431 (Human) Cell Lysate at 30 ug

Lane 4: Huvec (Human) Cell Lysate at 30 ug

Lane 5: HepG2 (Human) Cell Lysate at 30 ug

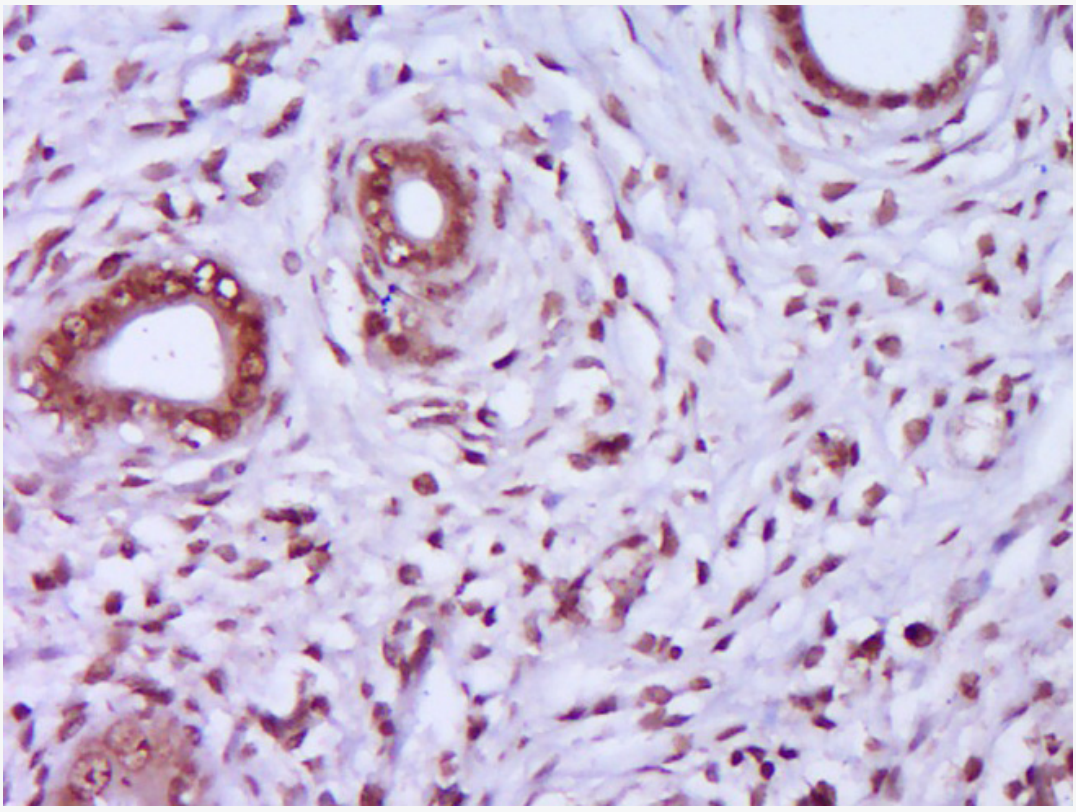
Primary:

Anti-HSP27 (SL0730R) at 1/1000 dilution

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

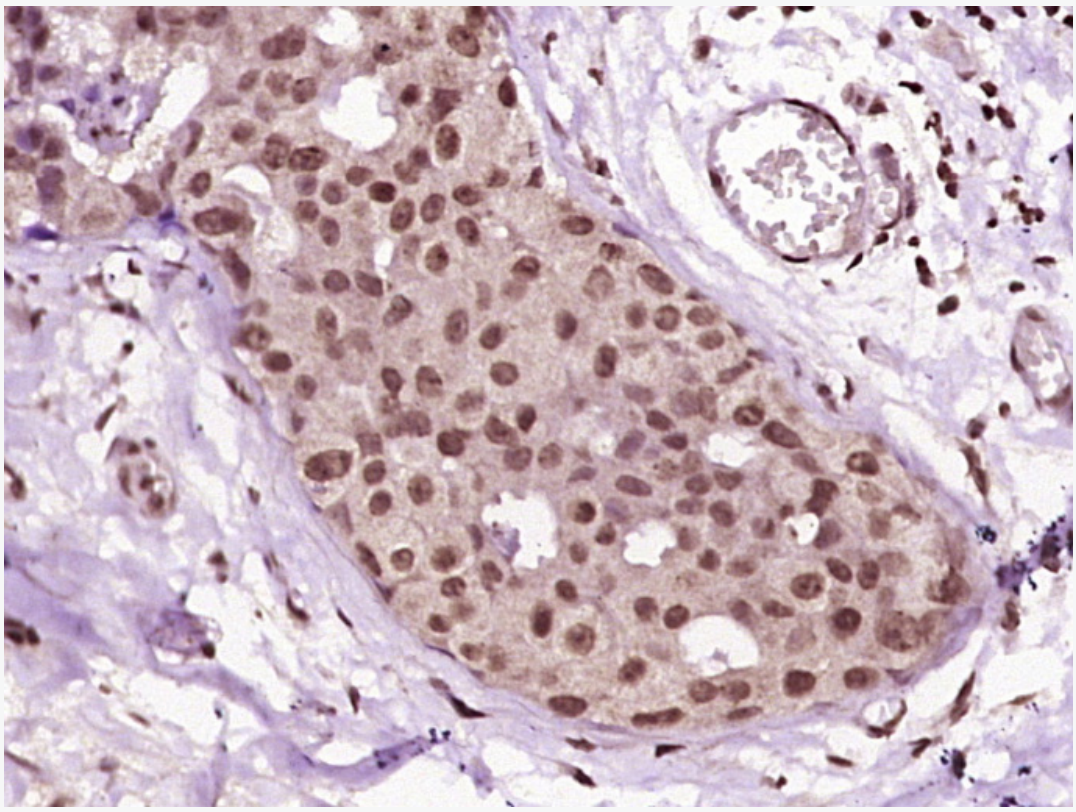
Predicted band size: 27-30 kD

Observed band size: 27 kD



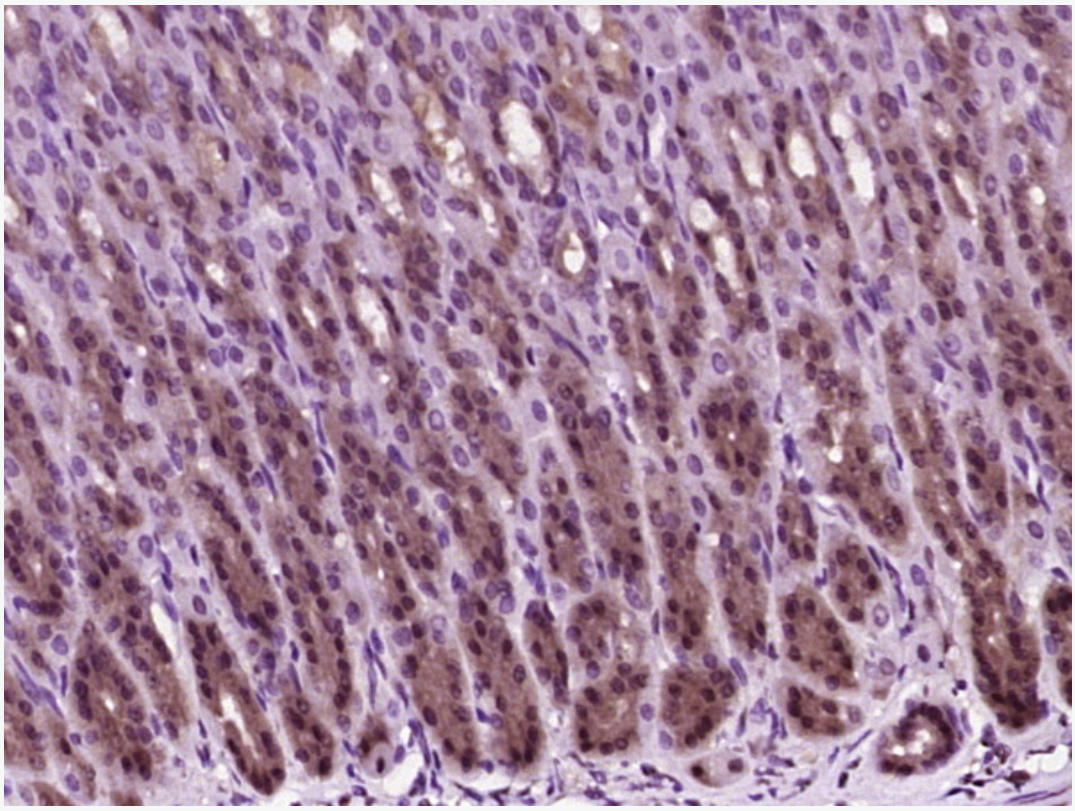
Paraformaldehyde-fixed, paraffin embedded (Rat uterus); Antigen retrieval by boiling

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 (HSP27) Polyclonal Antibody, Unconjugated (SL0730R) 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 breast 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 (HSP27) Polyclonal Antibody,

Unconjugated (SL0730R) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructions and DAB staining.



Paraformaldehyde-fixed, paraffin embedded (rat stomach 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 (HSP27) Polyclonal Antibody, Unconjugated (SL0730R) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructionsand DAB staining.

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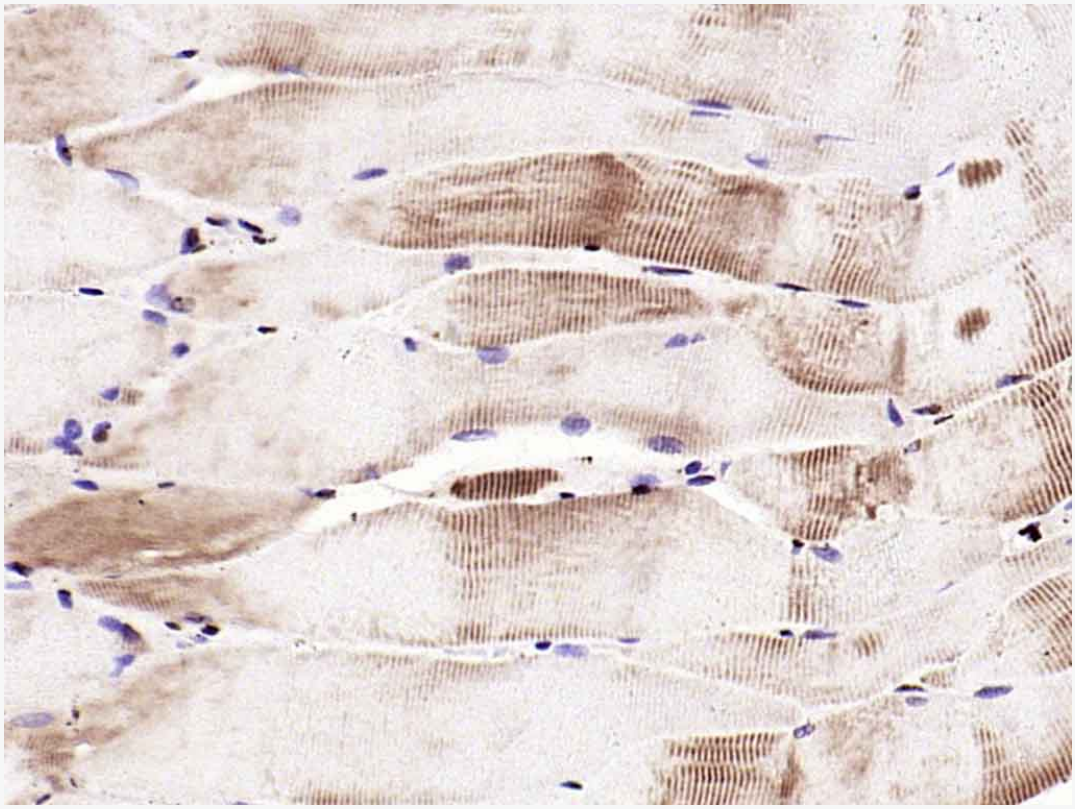

Paraformaldehyde-fixed, paraffin embedded (rat skeletal muscle); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (HSP27) Polyclonal Antibody, Unconjugated (SL0730R) at 1:200 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructionsand DAB staining.

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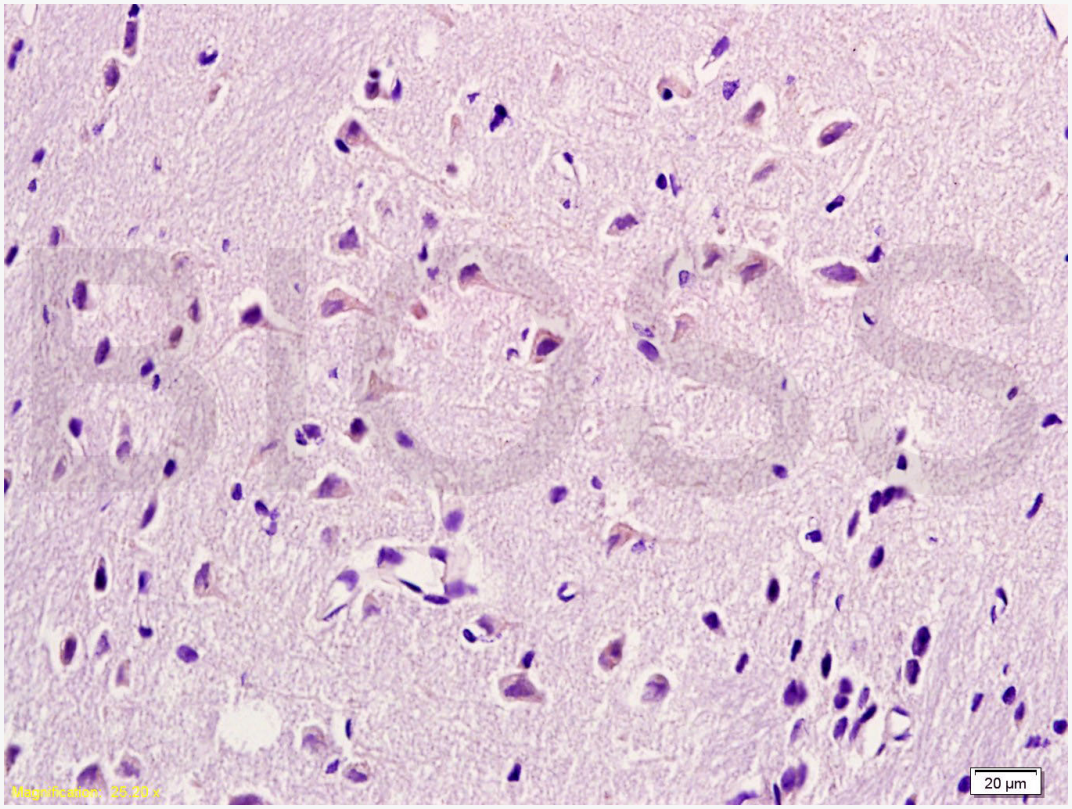

Tissue/cell: rat brain tissue; 4% Paraformaldehyde-fixed and paraffin-embedded; Antigen retrieval: citrate buffer (1M, pH 6.0), Boiling bathing for 15min; Block endogenous peroxidase by 3% Hydrogen peroxide for 30min; Blocking buffer (normal goat serum,C-0005) at 37℃ for 20 min;

Incubation: Anti-HSP-27 Polyclonal Antibody, Unconjugated(SL0730R) 1:200, overnight at 4°C, followed by conjugation to the secondary antibody(SP-0023) and DAB(C-0010) staining

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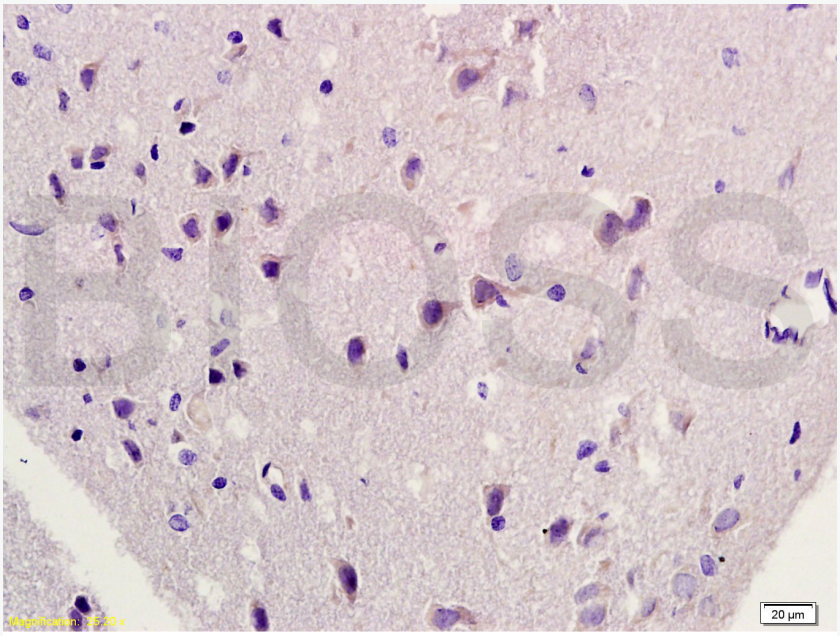

bs-0730R Anti-HSP-27 Polyclonal Antibody

Tissue/cell: rat brain tissue; 4% Paraformaldehyde-fixed and paraffin-embedded
Antigen retrieval: citrate buffer (0.01M, pH 6.0), Boiling bathing for 15min
Block endogenous peroxidase by 3% Hydrogen peroxide for 30min
Blocking buffer (normal goat serum) at 37℃ for 20 min
Incubation: Anti-HSP-27 Polyclonal Antibody, Unconjugated(bs-0730R) 1:200, overnight at 4°C, followed by conjugation to the secondary antibody and DAB staining

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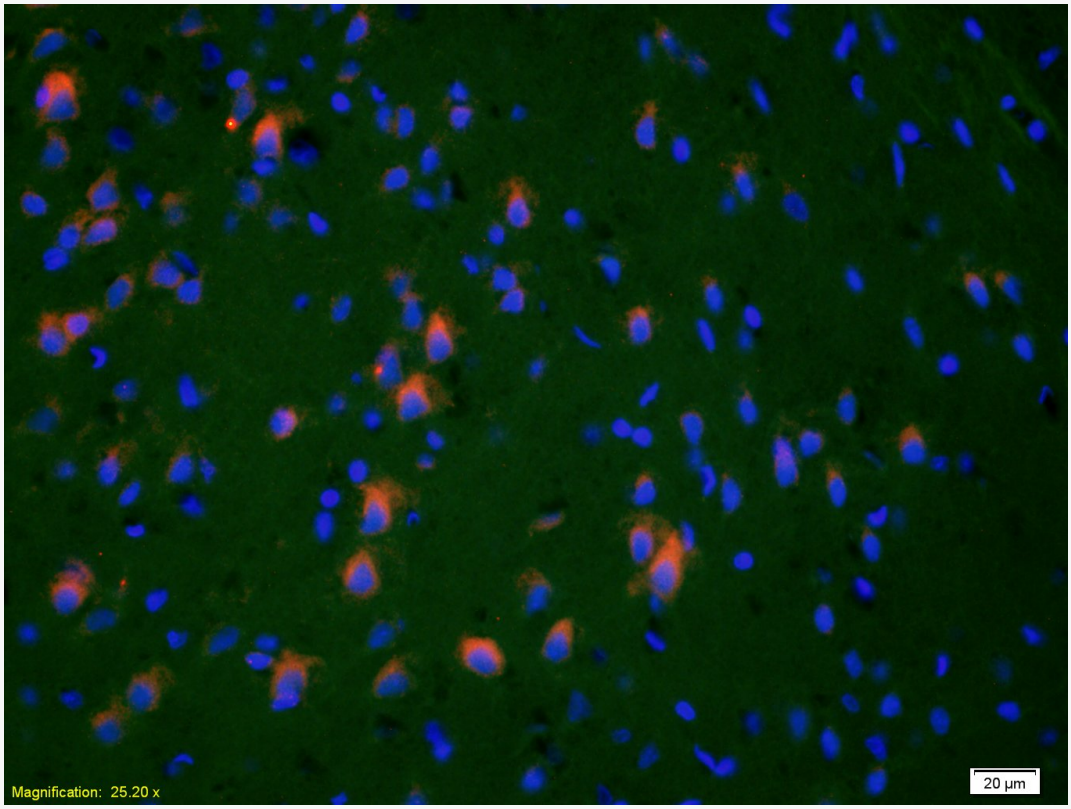
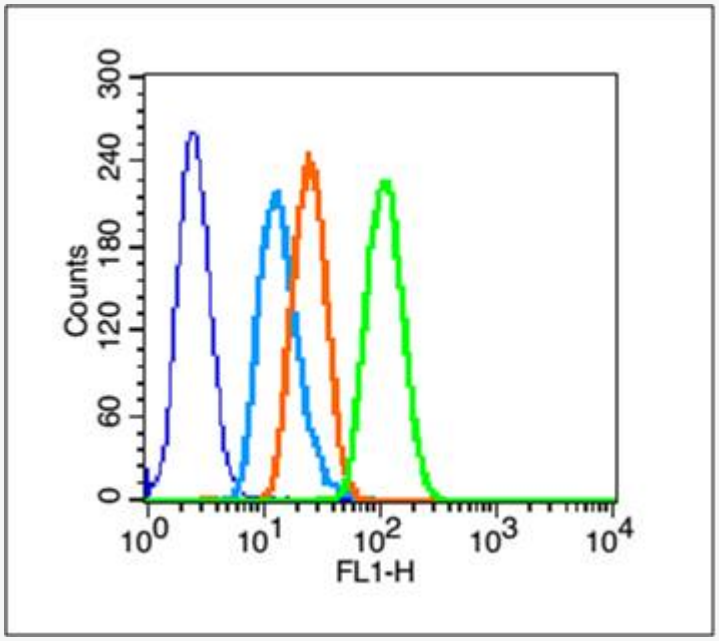


Tissue/cell: rat brain tissue;4% Paraformaldehyde-fixed and paraffin-embedded; Antigen retrieval: citrate buffer (1M, pH 6.0), Boiling bathing for 15min; Blocking buffer (normal goat serum,C-0005) at 37℃ for 20 min;

Incubation: Anti-HSP-27 Polyclonal Antibody, Unconjugated(SL0730R) 1:200, overnight at 4°C; The secondary antibody was Goat Anti-Rabbit IgG, Cy3 conjugated(SL0295G-Cy3)used at 1:200 dilution for 40 minutes at 37°C.

DAPI(5ug/ml,blue,C-0033) was used to stain the cell nuclei



Blank control (blue line): A431 cells (blue).

Primary Antibody (green line): Rabbit Anti-HSP27 antibody (SL0730R)

Dilution: 2µg /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 70% methanol (Overnight at 4°C) and then permeabilized with 90% ice-cold methanol for 20 min at -20°C. 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.