




## Rabbit Anti-Caspase 3 precursor antibody

SL2593R

<b>Product Name:</b>	Caspase 3 precursor
<b>Chinese Name:</b>	半胱天冬酶-3酶原抗体
<b>Alias:</b>	Caspase 3 precursor; APOPAIN; CASP3; Caspase 3 apoptosis related cysteine protease; Caspase3; CPP32; CPP32B; Cysteine protease CPP32; Human cysteine protease CPP32 isoform alpha mRNA complete cds; PARP cleavage protease; SCA 1; SCA1; SREBP cleavage activity 1; Yama; CASP3_HUMAN; Caspase-3; CASP-3; Apopain; Protein Yama; SREBP cleavage activity 1; SCA-1.
<b>文献引用</b> 	<p><b>Specific References(3)</b> SL2593R has been referenced in 3 publications.</p> <p><b>[IF=3.85]</b>Luo, Xiaoming, et al. "Pharmacokinetics and antitumor efficacy of micelles assembled from multiarmed amphiphilic copolymers with drug conjugates in comparison with drug-encapsulated micelles." European Journal of Pharmaceutics and Biopharmaceutics (2015).<b>IHC-P;Mouse.</b> <a href="#">PubMed:26523356</a></p> <p><b>[IF=5.74]</b>Duan, Xiaoxu, et al. "Antioxidant tert-butylhydroquinone ameliorates arsenic-induced intracellular damages and apoptosis through induction of Nrf2-dependent antioxidant responses as well as stabilization of anti-apoptotic factor Bcl? 2 in human keratinocytes." Free Radical Biology and Medicine(2016).<b>WB;Human.</b> <a href="#">PubMed:26878773</a></p> <p><b>[IF=1.06]</b>Zhang, Xiaolin, and Hao Yu. "Matrine inhibits diethylnitrosamine-induced HCC proliferation in rats through inducing apoptosis via p53, Bax-dependent caspase-3 activation pathway and down-regulating MLCK overexpression (Supplement 2016)." Iranian Journal of Pharmaceutical Research (2016).<b>WB;Rat.</b> <a href="#">PubMed:27642320</a></p>

<b>Organism Species:</b>	Rabbit
<b>Clonality:</b>	Polyclonal
<b>React Species:</b>	Human, Mouse, Rat, Dog, Rabbit,
<b>Applications:</b>	WB=1:500-2000 ELISA=1:500-1000 IHC-P=1:400-800 IHC-F=1:400-800 Flow-Cyt=1µg/test IF=1:100-500 (Paraffin sections need antigen repair) not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
<b>Molecular weight:</b>	28kDa
<b>Cellular localization:</b>	cytoplasmic
<b>Form:</b>	Lyophilized or Liquid
<b>Concentration:</b>	1mg/ml
<b>immunogen:</b>	KLH conjugated synthetic peptide derived from human Caspase 3 precursor:11-120/277
<b>Isotype:</b>	IgG
<b>Purification:</b>	affinity purified by Protein A
<b>Storage Buffer:</b>	0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.
<b>Storage:</b>	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.
<b>PubMed:</b>	<a href="#">PubMed</a>
<b>Product Detail:</b>	<p>Caspases are a family of cysteine proteases that are key mediators of programmed cell death or apoptosis. The precursor form of all caspases is composed of a prodomain, and large and small catalytic subunits. The active forms of caspases are generated by several stimuli including ligand-receptor interactions, growth factor deprivation and inhibitors of cellular functions. All known caspases require cleavage adjacent to aspartates to liberate one large and one small subunit, which associate into a2b2 tetramer to form the active enzyme. Gene for Caspase 3 also known as Yama, CPP32, and apopain codes for a 32-kDa protein. Caspase 3 cleaves the death substrate poly(ADP-ribose) polymerase (PARP) to a specific 85 kDa form observed during apoptosis and is inhibitable by the CrmA protein. Other Caspase 3 substrates include DNA-PK, actin, GAS2, and procaspase-6, etc. Caspase 3 is activated by cleavage events at Asp-28/Ser-29 (between N-terminal pro-domain) and Asp-175/Ser-176 (between large and small subunits) to generate a large subunit of 17-kDa and a small subunit of 12-kDa.</p> <p><b>Function:</b> Involved in the activation cascade of caspases responsible for apoptosis execution. At the onset of apoptosis it proteolytically cleaves poly(ADP-ribose) polymerase (PARP) at a '216-Asp- -Gly-217' bond. Cleaves and activates sterol regulatory element binding proteins (SREBPs) between the basic helix-loop-helix leucine zipper domain and the membrane attachment domain. Cleaves and activates caspase-6, -7 and -9. Involved in the cleavage of huntingtin. Triggers cell adhesion in sympathetic neurons through RET cleavage.</p> <p><b>Subunit:</b> Heterotetramer that consists of two anti-parallel arranged heterodimers, each one formed</p>

by a 17 kDa (p17) and a 12 kDa (p12) subunit. Interacts with BIRC6/bruce.

**Subcellular Location:**

Cytoplasm.

**Tissue Specificity:**

Highly expressed in lung, spleen, heart, liver and kidney. Moderate levels in brain and skeletal muscle, and low in testis. Also found in many cell lines, highest expression in cells of the immune system.

**Post-translational modifications:**

Cleavage by granzyme B, caspase-6, caspase-8 and caspase-10 generates the two active subunits. Additional processing of the propeptides is likely due to the autocatalytic activity of the activated protease. Active heterodimers between the small subunit of caspase-7 protease and the large subunit of caspase-3 also occur and vice versa. S-nitrosylated on its catalytic site cysteine in unstimulated human cell lines and denitrosylated upon activation of the Fas apoptotic pathway, associated with an increase in intracellular caspase activity. Fas therefore activates caspase-3 not only by inducing the cleavage of the caspase zymogen to its active subunits, but also by stimulating the denitrosylation of its active site thiol.

**Similarity:**

Belongs to the peptidase C14A family.

**SWISS:**

P55213

**Gene ID:**

836

**Database links:**

[Entrez Gene: 836](#)Human

[Entrez Gene: 12367](#)Mouse

[Entrez Gene: 397244](#)Pig

[Entrez Gene: 100008840](#)Rabbit

[Entrez Gene: 25402](#)Rat

[Omim: 600636](#)Human

[SwissProt: P42574](#)Human

[SwissProt: P70677](#)Mouse

[SwissProt: Q95ND5](#)Pig

[SwissProt: Q8MJC3](#)Rabbit

[SwissProt: P55213](#)Rat

[Unigene: 141125](#)Human

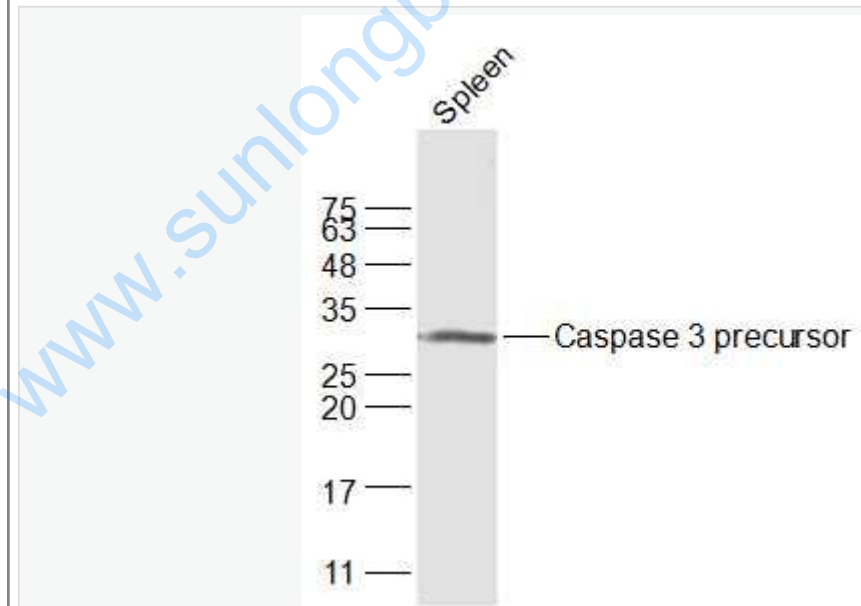
[Unigene: 34405](#)Mouse

[Unigene: 10562](#)Rat

**Important Note:**

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

**Picture:**



Sample:

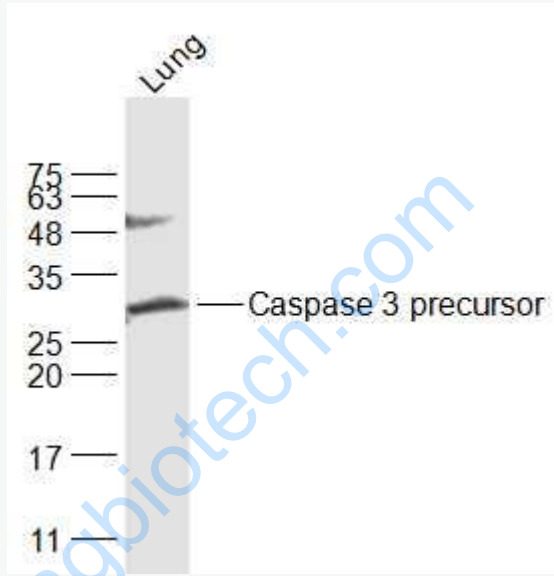
Spleen (Mouse) Lysate at 40 ug

Primary: Anti-Caspase 3 precursor? (SL2593R) at 1/1000 dilution

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

Predicted band size: 28 kD

Observed band size: 28 kD



Sample:

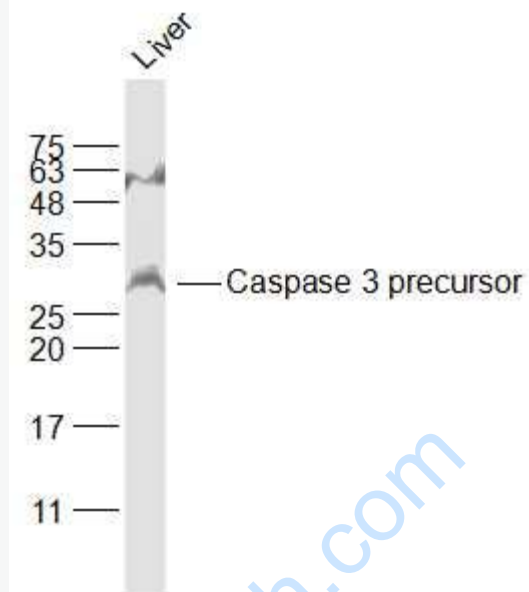
Lung (Mouse) Lysate at 40 ug

Primary: Anti-Caspase 3 precursor? (SL2593R) at 1/1000 dilution

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

Predicted band size: 28 kD

Observed band size: 28 kD



Sample:

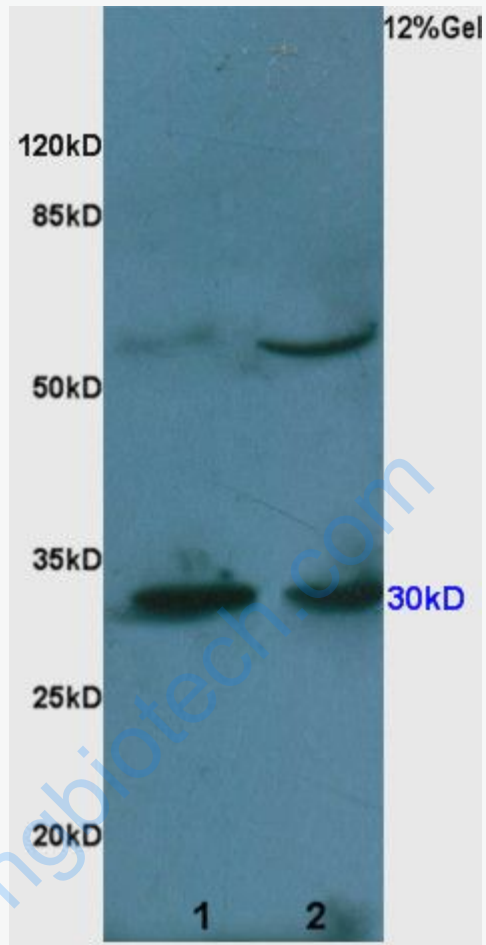
Liver (Mouse) Lysate at 40 ug

Primary: Anti-Caspase 3 precursor? (SL2593R) at 1/1000 dilution

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

Predicted band size: 28 kD

Observed band size: 28 kD



Sample:

Lane1: Brain (Mouse) Lysate at 30 ug

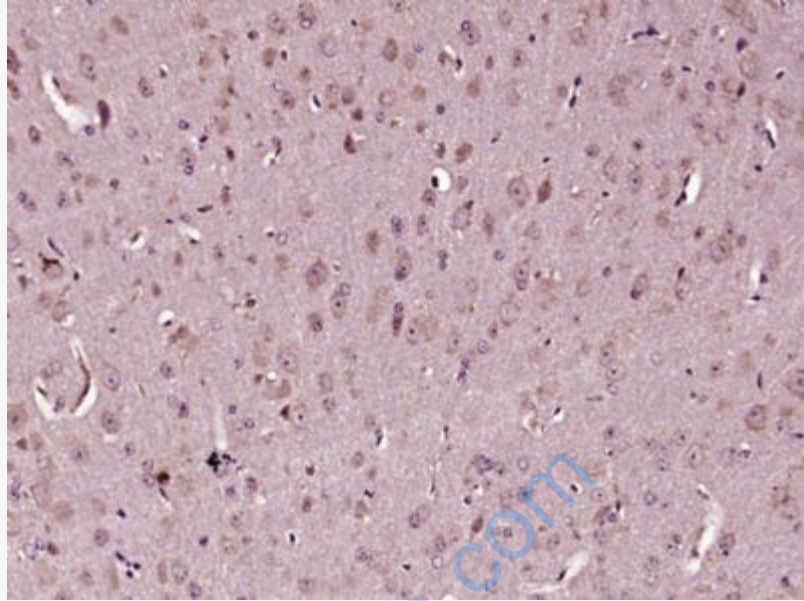
Lane2: Liver (Mouse) Lysate at 30 ug

Primary: Anti-pro-caspase-3 (SL2593R) at 1:300 dilution;

Secondary: HRP conjugated Goat Anti-Rabbit IgG(SL2593R) at 1:3000 dilution;

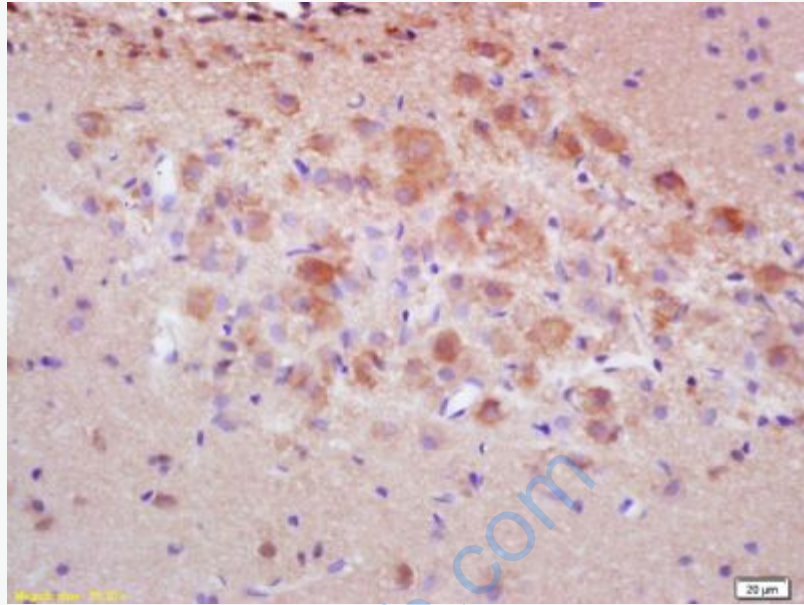
Predicted band size : 28kD

Observed band size : 30kD

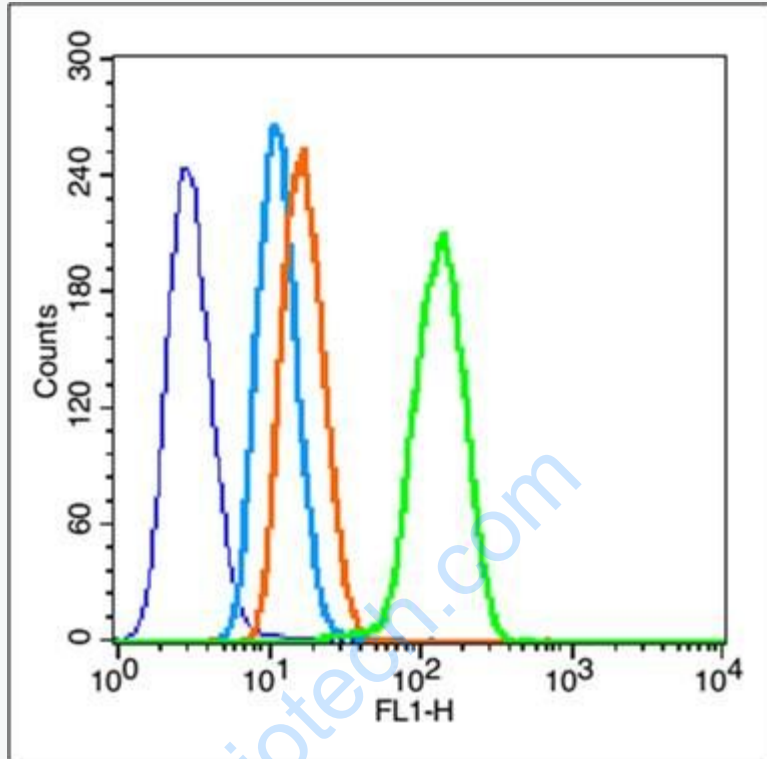


Paraformaldehyde-fixed, paraffin embedded (Mouse brain); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (Caspase 3 precursor) Polyclonal Antibody, Unconjugated (SL2593R) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructions and DAB staining.





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,C-0005) at 37°C for 20 min;  
Incubation: Anti-pro-caspase-3 Polyclonal Antibody, Unconjugated(SL2593R) 1:200, overnight at 4°C, followed by conjugation to the secondary antibody(SP-0023) and DAB(C-0010) staining

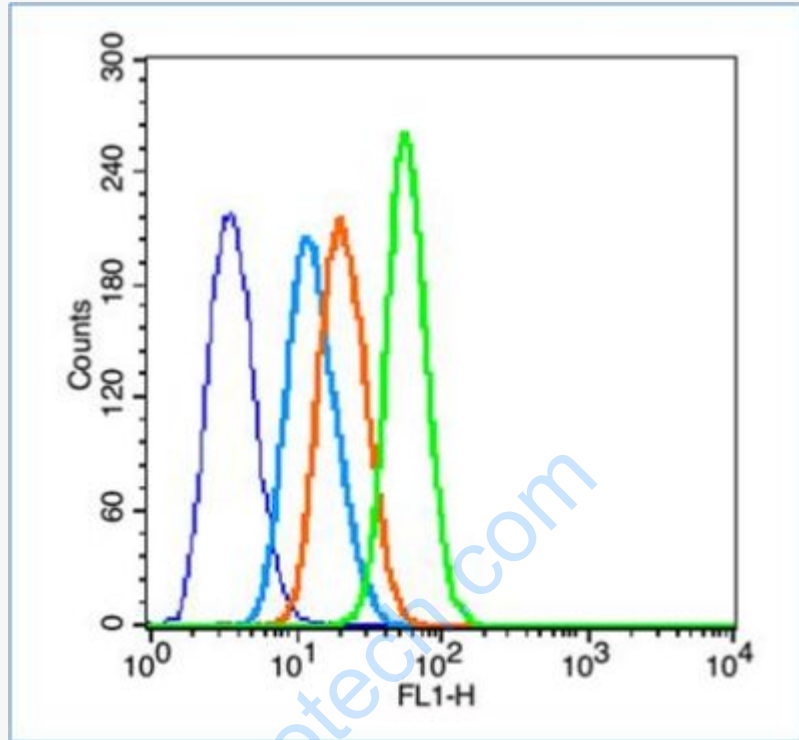


Blank control (blue line): HeLa (fixed with 80% methanol (5 min at -20°C) and then permeabilized with 0.1% PBS-Tween for 20 min at room temperature).

Primary Antibody (green line): Rabbit Anti-Caspase 3 precursor antibody (SL2593R), Dilution: 1µg /10<sup>6</sup> cells;

Isotype Control Antibody (orange line): Rabbit IgG .

Secondary Antibody (white blue line): Goat anti-rabbit IgG-FITC, Dilution: 1µg /test.



Blank control (blue line): HL60 (fixed with 2% paraformaldehyde (10 min) and then permeabilized with 0.1% PBS-Tween for 20 min at room temperature).

Primary Antibody (green line): Rabbit Anti-Caspase 3 precursor antibody (SL2593R), Dilution:  $1\mu\text{g}/10^6$  cells;

Isotype Control Antibody (orange line): Rabbit IgG .

Secondary Antibody (white blue line): Goat anti-rabbit IgG-FITC, Dilution:  $1\mu\text{g}/\text{test}$ .