SunLong Biotech Co.,LTD
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Rabbit Anti-Cytochrome C antibody

SL0013R

Product Name	Cytochrome C
Chinese Name	细胞色素 C 抗体
Alias	CytC; CYC; CYCS; Cytochrome c somatic; HCS; CYC_HUMAN; Cytochrome-c; MSA06; THC4.
Research Area	Tumour Cardiovascular Cell biology Neurobiology Signal transduction Apoptosis Lipoprotein The new supersedes the old Mitochondrion
Immunogen Species	Rabbit
Clonality	Polyclonal
React Species	Mouse,Rat,Human (predicted:Pig,Cow,Horse)
Applications	WB=1:500-2000,ICC/IF=1:100-500,IHC-P=1:100-500,IHC-F=1:100-500,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.
Theoretical molecular weight	12kDa
Detection molecular weight	14.4kDa
Cellular localization	cytoplasmic The cell membrane Mitochondrion
Form	Liquid
Concentration	1mg/ml
immunogen	KLH conjugated synthetic peptide derived from human Cytochrome C: 51-105/105
Lsotype	IgG
Purification	affinity purified by Protein A
Buffer Solution	1M TBS(pH7.4) with 1% BSA, 3% Proclin300 and 50% Glycerol.
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

Cytochrome C is an electron transporting protein that resides within the intermembrane space of the mitochondria, where it plays a critical role in the process of oxidative phosphorylation and production of cellular ATP. An increasing amount of interest has been directed toward the role which cytocrome C has been demonstrated to play in apoptotic processes. Following exposure to apoptotic stimuli, cytochrome C is rapidly released from the mitochondria into the cytosol, an event which may be required for the completion of apoptosis in some systems. Cytosolic cytochrome C functions in the activation of caspase 3, an ICE family molecule that is a key effector of apoptosis.

Function:
Electron carrier protein. The oxidized form of the cytochrome c heme group can accept an electron from the heme group of the cytochrome c1 subunit of cytochrome reductase. Cytochrome c then transfers this electron to the cytochrome oxidase complex, the final protein carrier in the mitochondrial electron-transport chain.
Plays a role in apoptosis. Suppression of the anti-apoptotic members or activation of the pro-apoptotic members of the Bcl-2 family leads to altered mitochondrial membrane permeability resulting in release of cytochrome c into the cytosol. Binding of cytochrome c to Apaf-1 triggers the activation of caspase-9, which then accelerates apoptosis by activating other caspases.

Product Detail

Subcellular Location:
Mitochondrion intermembrane space. Note=Loosely associated with the inner membrane.

Post-translational modifications:
Binds 1 heme group per subunit.
Phosphorylation at Tyr-49 and Tyr-98 both reduce by half the turnover in the reaction with cytochrome c oxidase, down-regulating mitochondrial respiration.

DISEASE:
Defects in CYCS are the cause of thrombocytopenia type 4 (THC4) [MIM:612004]; also known as autosomal dominant thrombocytopenia type 4. Thrombocytopenia is the presence of relatively few platelets in blood. THC4 is a non-syndromic form of thrombocytopenia. Clinical manifestations of thrombocytopenia are absent or mild. THC4 may be caused by dysregulated platelet formation.

Similarity:
Belongs to the cytochrome c family.

SWISS:
P99999

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Gene ID:
54205

Database links:

Entrez Gene: 54205 Human

Entrez Gene: 13063 Mouse

Entrez Gene: 25309 Rat

Omim: 123970 Human

SwissProt: P99999 Human

SwissProt: P62897 Mouse

SwissProt: P62898 Rat

Unigene: 437060 Human

细胞色素 C（cytC）是一种电子传递链蛋白为 Mitochondrion 呼吸链必须的成份之一。在哺乳动物细胞中，如此高度保守性蛋白常分布在 Mitochondrion 内膜。
新近研究证明 cytoplasmic 中细胞色素 C 为激活细胞调亡所必需的因子。在调亡的过程中，细胞色素 C 从 Mitochondrion 膜被易位到 cytoplasmic，由细胞色素 C 激活 Caspase-3（CPP32）。
细胞色素 C 的易位可被过量表达的 Bcl-2 阻断。细胞色素 B 与细胞色素 C1 和 Riesk 蛋白相结合而形成复合物 III（也称细胞色素 B-C1 复合物）参与细胞呼吸链。该蛋白动物种属间同源性较高；如 ： 猪、犬、牛、鸡、豚鼠等。

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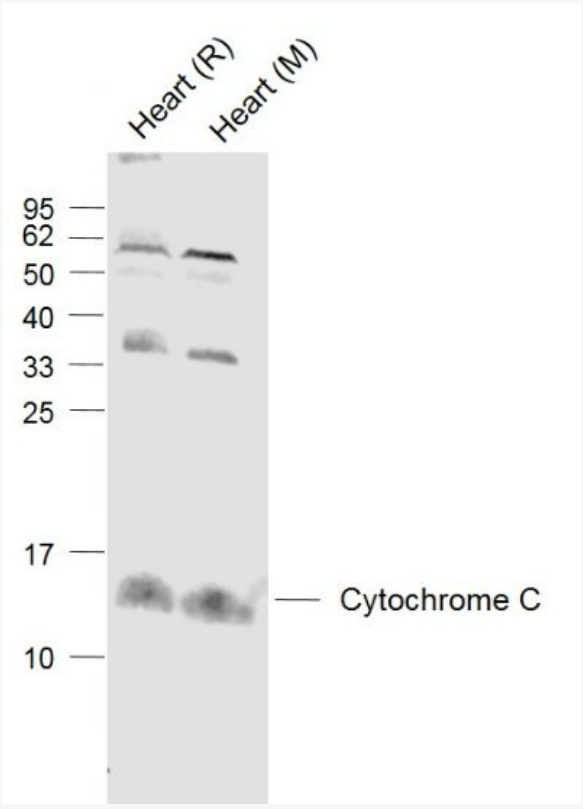
Product Picture



Sample:

Lane 1: Heart (Rat) Lysate at 40 ug

Lane 2: Heart (Mouse) Lysate at 40 ug

Primary: Anti-Cytochrome C (SL0013R) at 1/1000 dilution

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

Predicted band size: 14.4 kD

Observed band size: 14.4 kD

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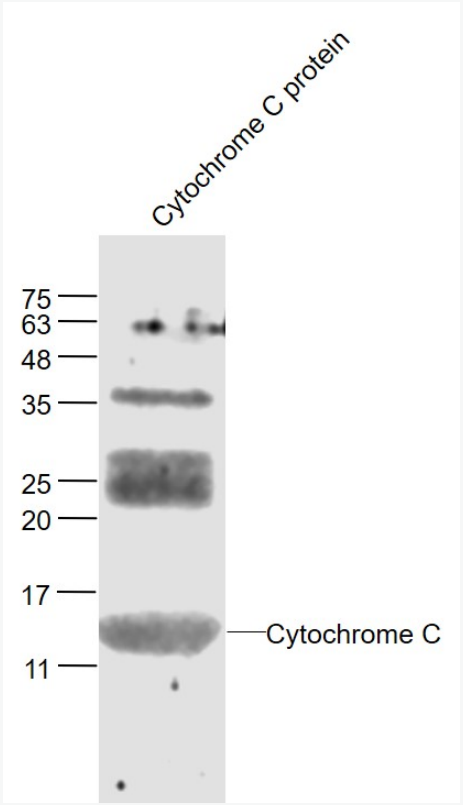


Sample:

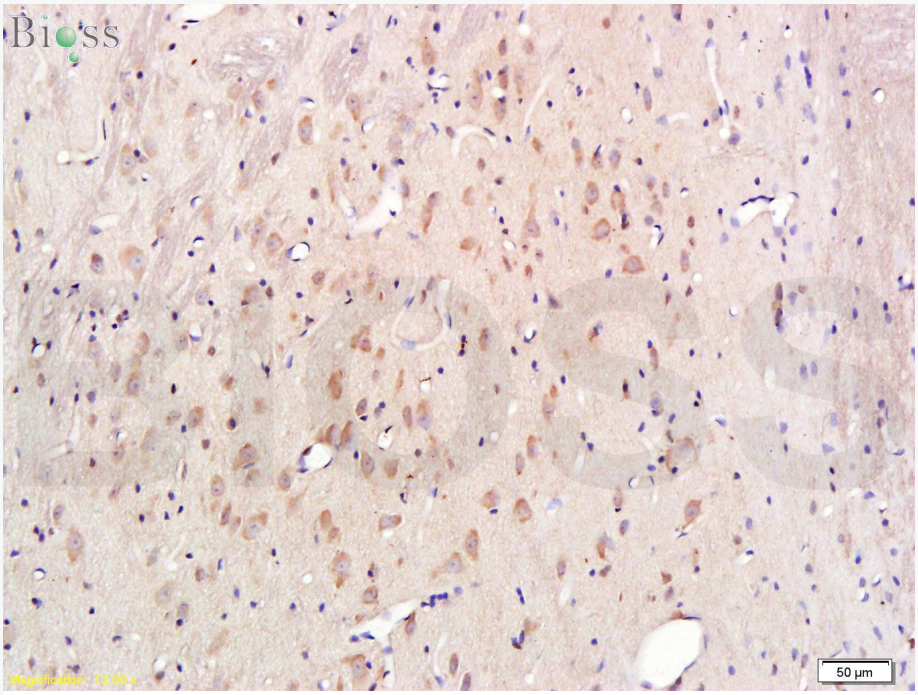
Cytochrome C protein at 30 ug

Primary: Anti- Cytochrome C (SL0013R) at 1/300 dilution

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

Predicted band size: 14 kD

Observed band size: 14 kD



bs-0013R Anti-Cytochrome C

Formalin-fixed and paraffin-embedded rat brain tissue labeled with Rabbit Anti-Cytochrome C Polyclonal Antibody, Unconjugated(bs-0013R) at 1:300 followed by conjugation to the secondary antibody and DAB staining

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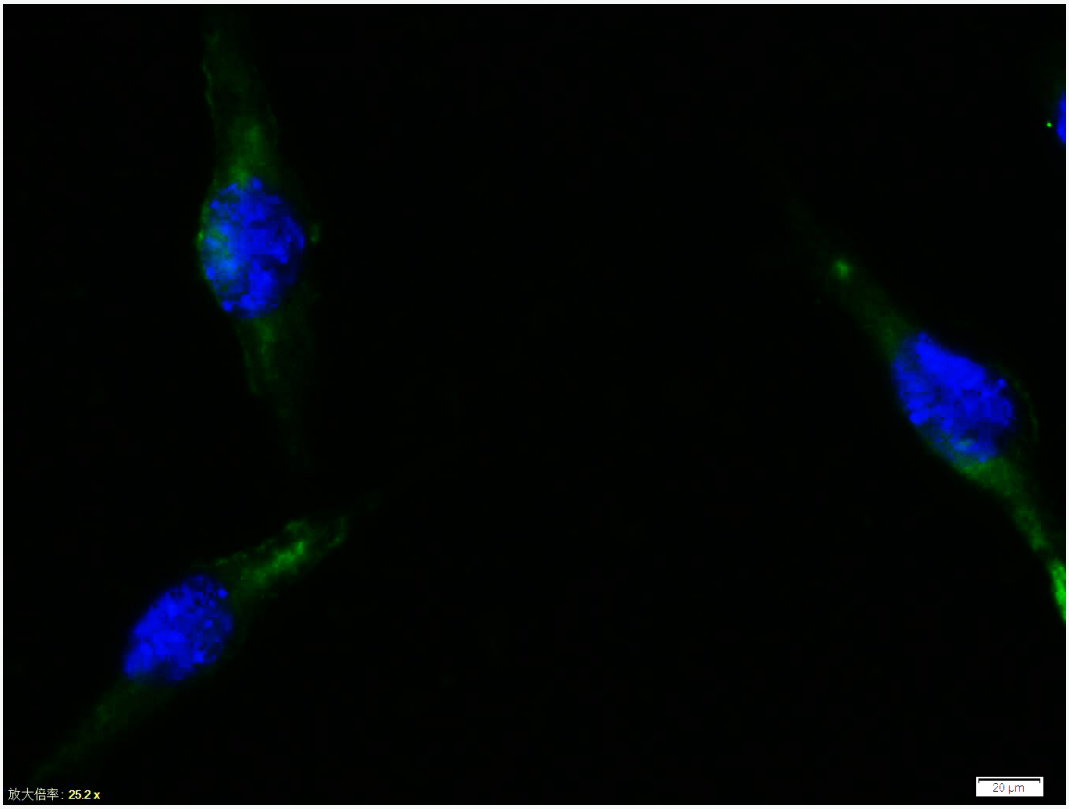

Tissue/cell:Sh-sy5y cell; 4% Paraformaldehyde-fixed; Triton X-100 at room temperature for 20 min; Blocking buffer (normal goat serum, C-0005) at 37°C for 20 min; Antibody incubation with (Cytochrome C) polyclonal Antibody, Unconjugated (SL0013R) 1:100, 90 minutes at 37°C; followed by a FITC conjugated Goat Anti-Rabbit IgG antibody at 37°C for 90 minutes, DAPI (blue, C02-04002) was used to stain the cell nuclei.

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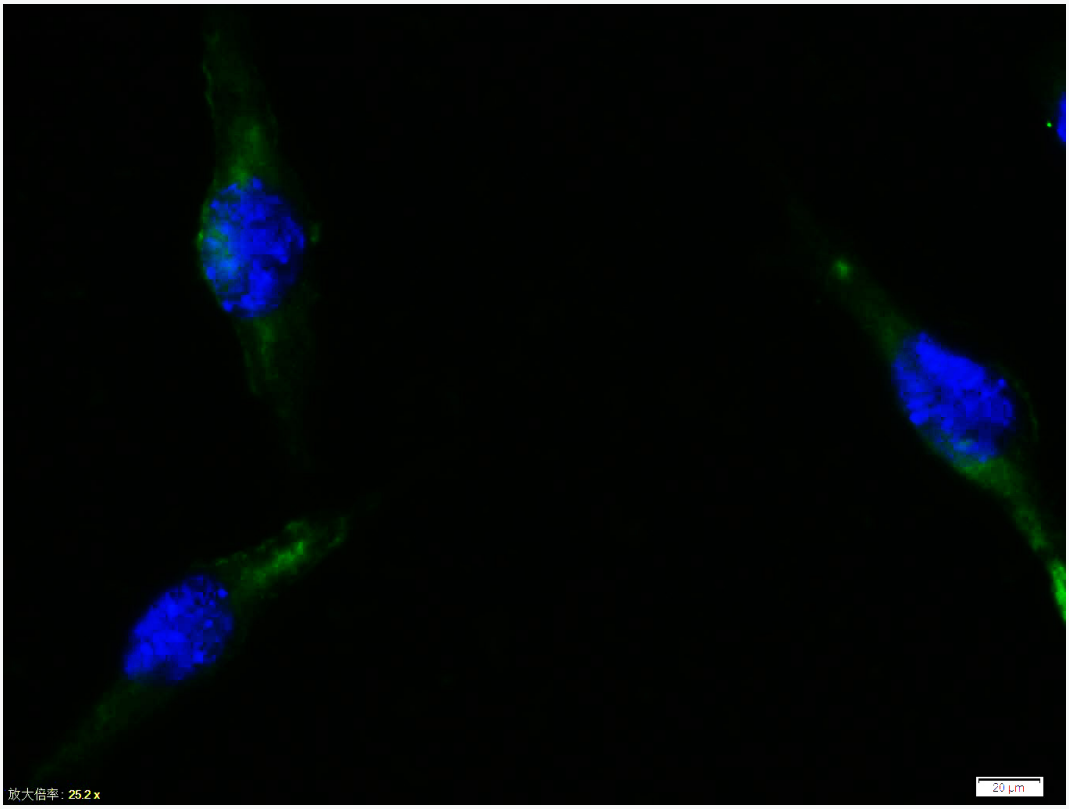

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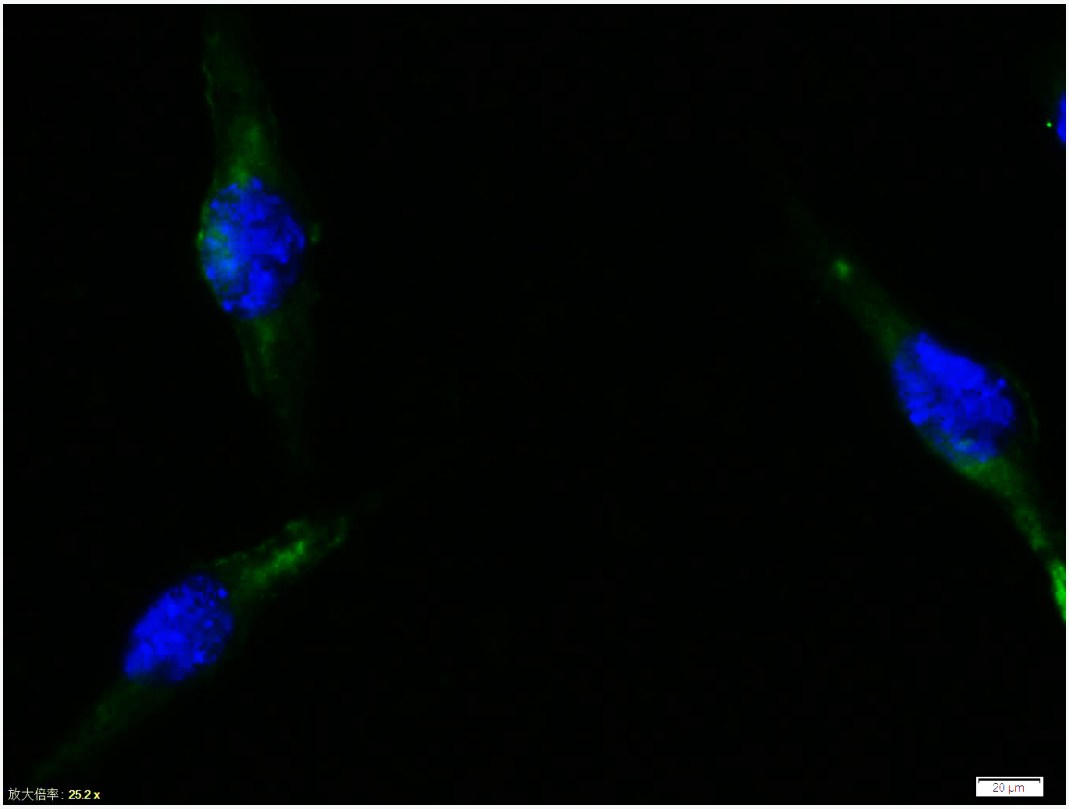

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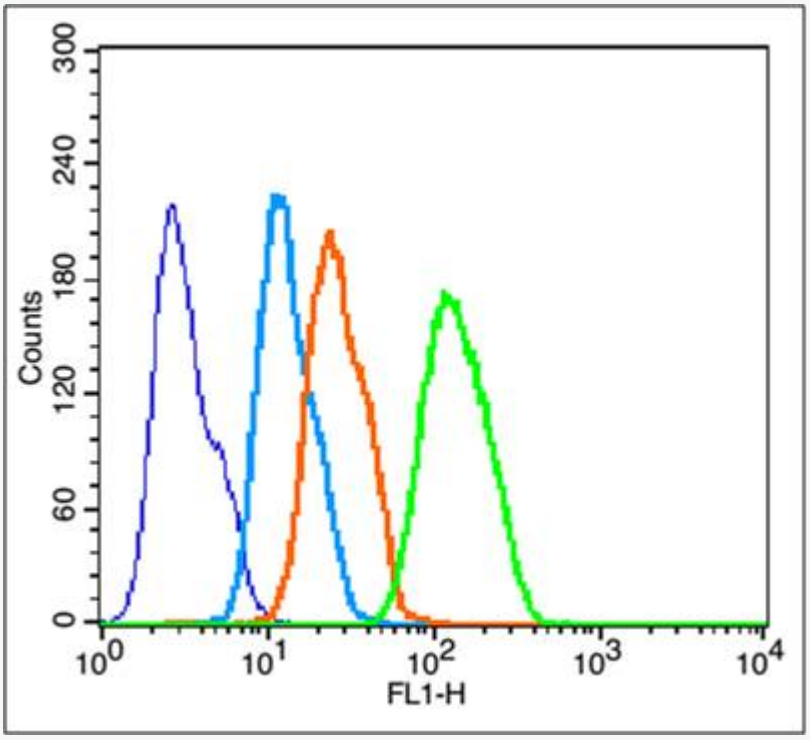

Blank control: HepG2(blue).

Primary Antibody:Rabbit Anti-Cytochrome C antibody (SL0013R,Green); Dilution: 1μg in 100 μL 1X PBS containing 0.5% BSA;

Isotype Control Antibody: Rabbit IgG(orange) ,used under the same conditions;

Secondary Antibody: Goat anti-rabbit IgG-FITC(white blue), Dilution: 1:200 in 1 X PBS containing 0.5% BSA.

Protocol

The cells were fixed with 2% paraformaldehyde for 10 min at 37°C. Primary antibody (SL0013R, 1μg /1x10^6 cells) were incubated for 30 min at room temperature, followed by 1 X PBS containing 0.5% BSA + 1 0% goat serum (15 min) to block non-specific protein-protein interactions. Then the Goat Anti-rabbit IgG/FITC

antibody was added into the blocking buffer mentioned above to react with the primary antibody at 1/200 dilution for 40 min at room temperature. Acquisition of 20,000 events was performed.