

## Rabbit Anti-AACT antibody

SL0094R

<b>Product Name</b>	AACT
<b>Chinese Name</b>	$\alpha$ -1 抗胰糜蛋白酶/SERPINA3 抗体
<b>Alias</b>	AACT_HUMAN; SERPINA3; Alpha-1-antichymotrypsin; ACT; Cell growth-inhibiting gene 24/25 protein; Serpin A3; GIG24; GIG25; serpin family A member 3;
<b>Research Area</b>	Cardiovascular Cell biology Neurobiology Diabetes Ubiquitin Alzheimer's
<b>Immunogen Species</b>	Rabbit
<b>Clonality</b>	Polyclonal
<b>React Species</b>	Human, Mouse, Rat, WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500 (Paraffin sections need antigen repair)
<b>Applications</b>	not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
<b>Theoretical molecular weight</b>	45kDa
<b>Cellular localization</b>	Secretory protein
<b>Form</b>	Liquid
<b>Concentration</b>	1mg/ml
<b>immunogen</b>	KLH conjugated synthetic peptide derived from human AACT-Alpha1: 121-320/423
<b>Lsotype</b>	IgG
<b>Purification</b>	affinity purified by Protein A
<b>Buffer Solution</b>	1M TBS(pH7.4) with 1% BSA, 3% Proclin300 and 50% Glycerol.
<b>Storage</b>	Shipped at 4°C. Store at -20 °C for one year. Avoid repeated freeze/thaw cycles.
<b>Attention</b>	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
<b>PubMed</b>	<a href="#">PubMed</a>

Alpha 1-Antichymotrypsin, a member of the serine proteinase inhibitor (serpin) family, inhibits neutrophil proteinase cathepsin G and mast cell chymases, and protects the lower respiratory tract from damage by proteolytic enzymes. It contains a reactive centre loop, which interacts with cognate proteinases, resulting in loop cleavage and a major conformational change. Recently, alpha 1-antichymotrypsin has been identified as a major constituent of the neurofibrillary plaques associated with Alzheimers disease, and in vitro studies have shown that it enhances the rate of amyloid-fibril formation. These observations and recent genetic evidence suggest that alpha 1-antichymotrypsin is important in the pathogenesis of Alzheimers disease.

**Function:**

Although its physiological function is unclear, it can inhibit neutrophil cathepsin G and mast cell chymase, both of which can convert angiotensin-1 to the active angiotensin-2.

**Subunit:**

Interacts with DNAJC1.

**Subcellular Location:**

Secreted.

**Product Detail**

**Tissue Specificity:**

Plasma. Synthesized in the liver. Like the related alpha-1-antitrypsin, its concentration increases in the acute phase of inflammation or infection. Found in the amyloid plaques from the hippocampus of Alzheimer disease brains.

**Similarity:**

Belongs to the serpin family.

**SWISS:**

P01011

**Gene ID:**

12

**Database links:**

[Entrez Gene: 12](#) Human

[Omim: 107280](#) Human

[SwissProt: P01011](#) Human

[Unigene: 534293](#) Human

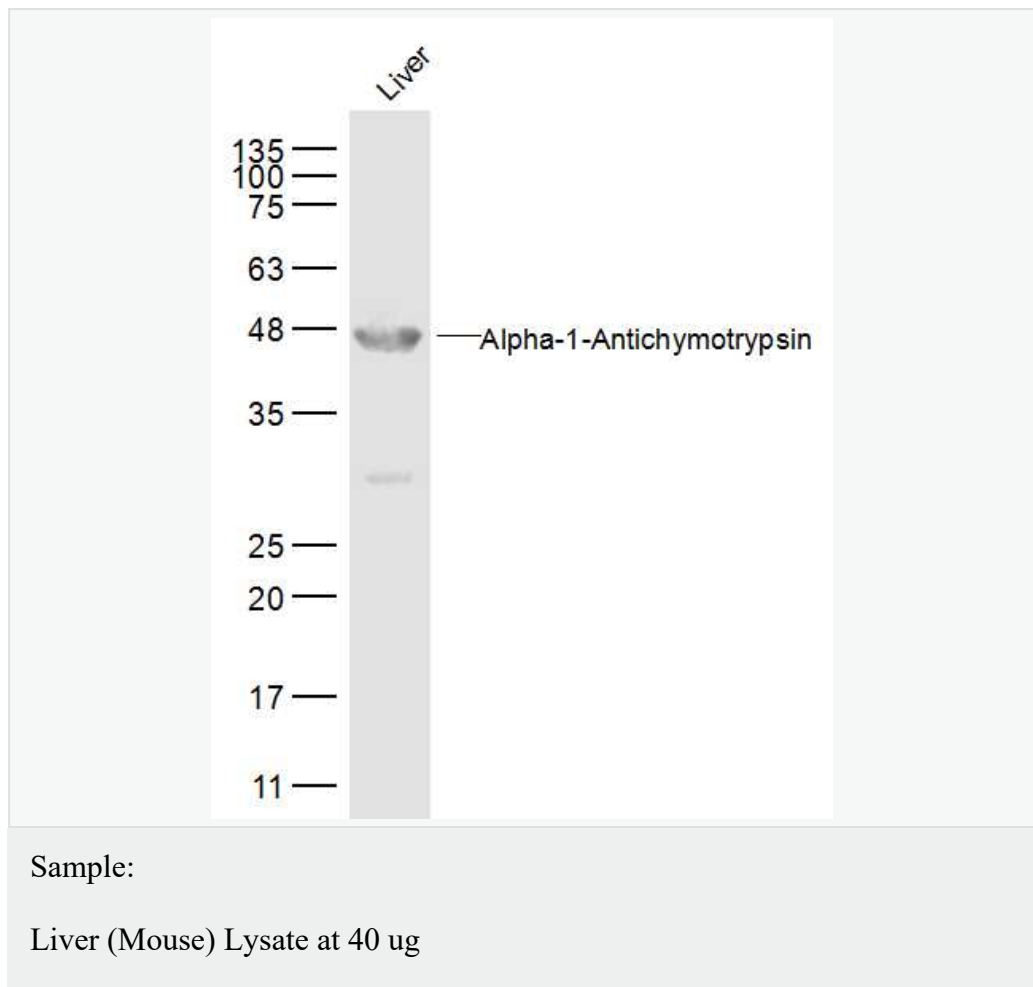
[Unigene: 710488](#) Human

AACT 是由神经胶质细胞分泌并参与淀粉样纤维生成和沉积的一种色氨酸蛋白酶抑制剂,被认为是 A $\beta$  肽的假性底物,与 A $\beta$  肽具有很高的亲合性,可促进 A $\beta$  肽的纤维化以生成淀粉样沉积。

ApoE 作为 AD 的另一种病理伴随性物质,也可识别并与 A $\beta$  肽相结合,促进 A $\beta$  肽沉积生成淀粉样老年斑块。由于 AACT 和 [ApoE](#) 在 AD 发病中具有共同的作用途径,因此探讨其相互作用可能是 AD 治疗中一个新的途径。

AACT 是一种丝氨酸蛋白酶抑制剂,可以中和糜蛋白酶等酶活性的蛋白酶,存在于大多数的组织细胞、巨噬细胞以及多种胃肠道和肺部 Tumour 中,但多形核白细胞中无此物质,它可以作为组织细胞瘤和良性/恶性纤维组织细胞瘤的标志。此抗体与人的 AACT 反应,主要用于恶性纤维组织细胞瘤等恶性 Tumour 的诊断,也可用于胃癌、肺癌、肾癌等 Tumour 的研究。

**Product  
Picture**

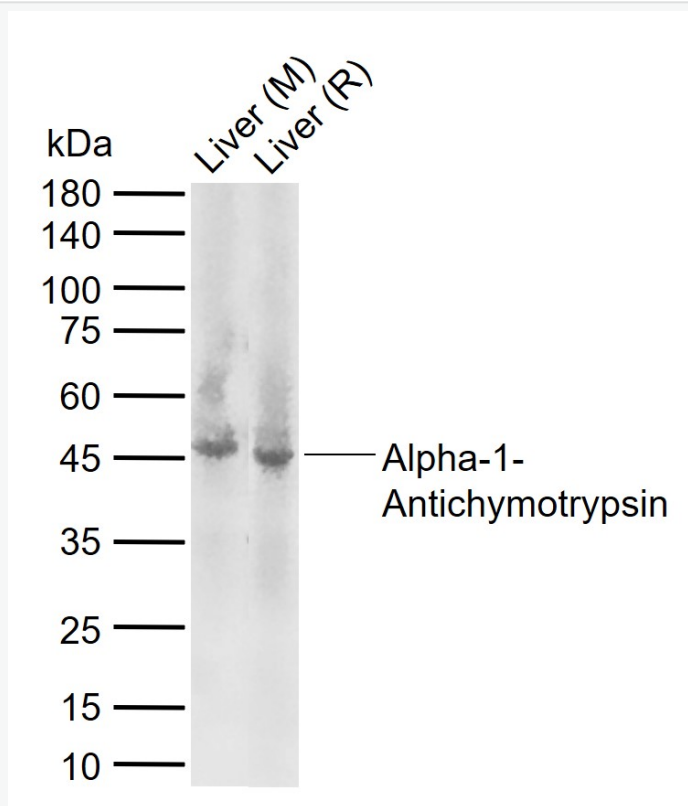


Primary: Anti-Alpha-1-Antichymotrypsin (SL0094R) at 1/500 dilution

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

Predicted band size: 45 kD

Observed band size: 47 kD



Sample:

Lane 1: Mouse Liver tissue lysates

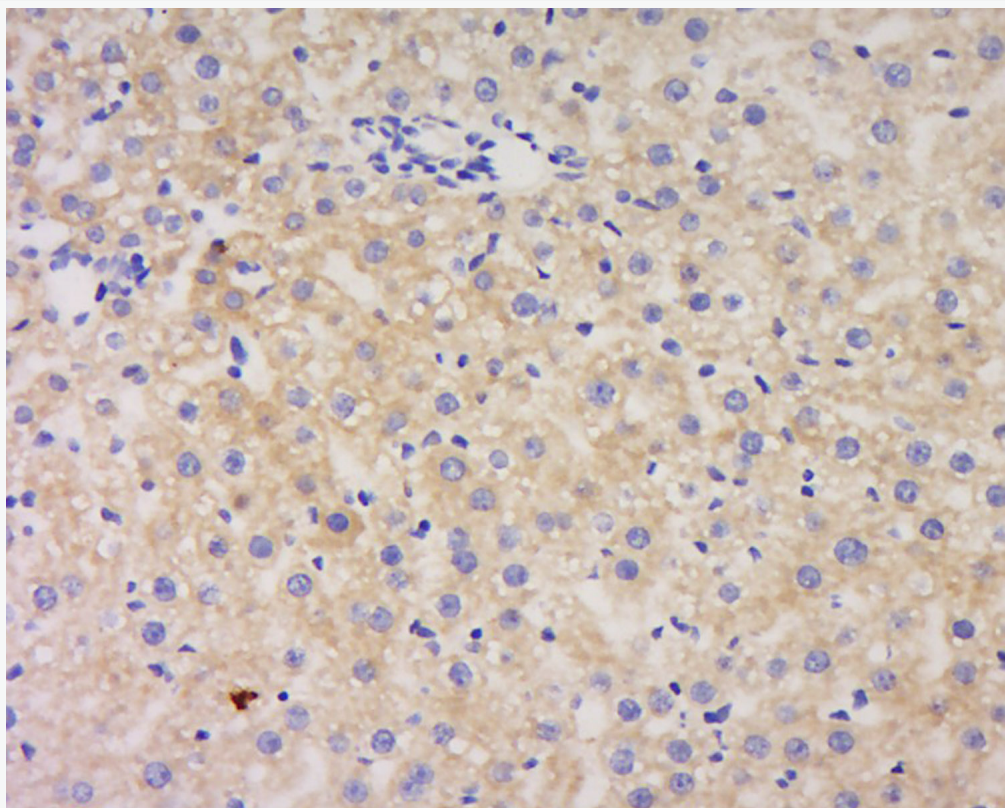
Lane 2: Rat Liver tissue lysates

Primary: Anti-Alpha-1-Antichymotrypsin (SL0094R) at 1/1000 dilution

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

Predicted band size: 45 kDa

Observed band size: 45 kDa



Tissue/cell: Mouse liver tissue; 4% Paraformaldehyde-fixed and paraffin-embedded;

Antigen retrieval: citrate buffer ( 1M, pH 6.0 ), Boiling bathing for 15min;

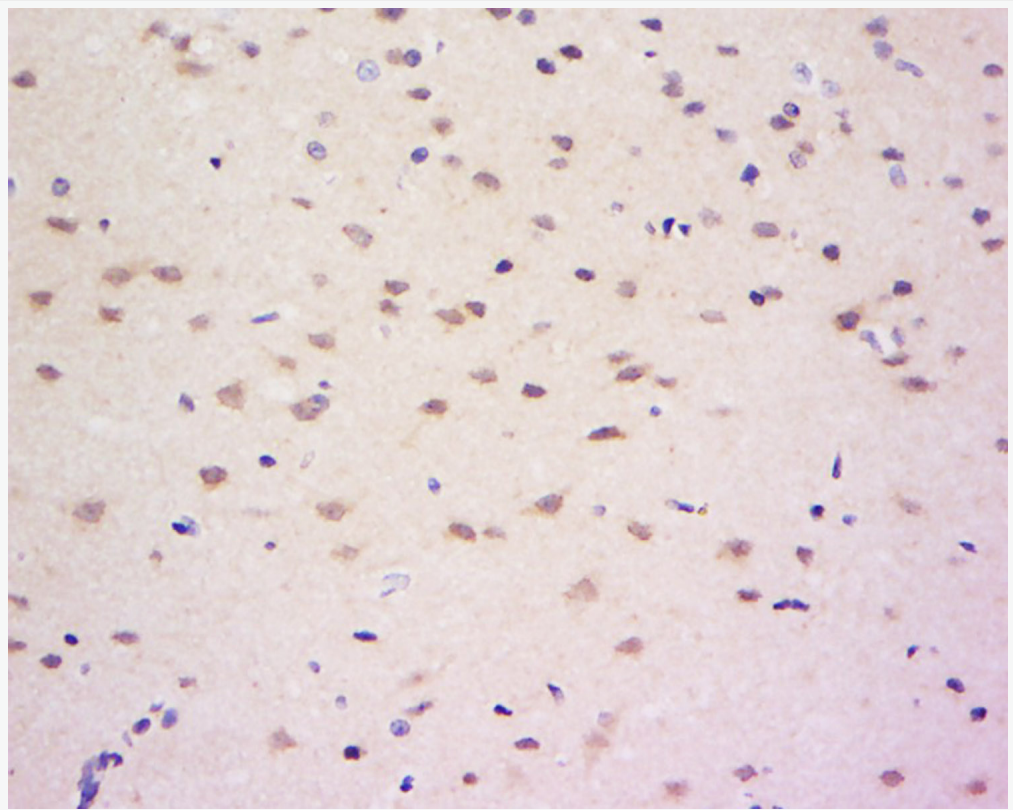
Block endogenous peroxidase by 3% Hydrogen peroxide for 30min;

Blocking buffer (normal goat serum,C-0005) at 37°C for 20 min;

Incubation: Anti- Alpha-1-Antichymotrypsin Polyclonal Antibody,

Unconjugated (SL0094R) 1:200, overnight at 4°C, followed by conjugation

to the secondary antibody(SP-0023) and DAB(C-0010) staining



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°C for 20 min;

Incubation: Anti- Alpha-1-Antichymotrypsin Polyclonal Antibody,

Unconjugated (SL0094R) 1:200, overnight at 4°C, followed by conjugation to the secondary antibody(SP-0023) and DAB(C-0010) staining



SunLong Biotech Co.,LTD  
Tel: 0086-571-56623320 Fax:0086-571-56623318  
E-mail:sales@sunlongbiotech.com  
www.sunlongbiotech.com

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