



## Rabbit Anti-CA II antibody

SL21856R

<b>Product Name:</b>	CA II
<b>Chinese Name:</b>	碳酸酐酶2抗体
<b>Alias:</b>	Carbonic anhydrase II ; CA 2; CA II; CA2; CAII; Car 2; Car2; Carbonate dehydratase II; Carbonic anhydrase 2 ; Carbonic anhydrase B; Carbonic anhydrase C; Carbonic anhydrase II; Carbonic dehydratase.
<b>Organism Species:</b>	Rabbit
<b>Clonality:</b>	Polyclonal
<b>React Species:</b>	Human,Mouse,Rat,
<b>Applications:</b>	ELISA=1:500-1000IHC-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.
<b>Molecular weight:</b>	29kDa
<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 CA II:201-260/260
<b>Lsotype:</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>	Carbonic anhydrase II (CAII) is a single polypeptide chain of molecular weight 29kDa. It is present in the cytosol of most tissues, but highest concentrations are found, like Carbonic Anhydrase I, in erythrocytes. The concentration in erythrocytes is about 20µM. It catalyses the hydration of CO <sub>2</sub> and the hydrolysis of esters. Zn <sup>2+</sup> ion cofactor is

required for enzyme activity. Certain point mutations occur without apparent clinical effect, however, complete absence leads to mild mental retardation and cerebral calcification, osteoporosis and renal tubular acidosis. Also known as: Carbonic anhydrase II ; CA 2; CA II; CA2; CAII; Car 2; Car2; Carbonate dehydratase II; Carbonic anhydrase 2 ; Carbonic anhydrase B; Carbonic anhydrase C; Carbonic anhydrase II; Carbonic dehydratase.

**Function:**

Essential for bone resorption and osteoclast differentiation (By similarity). Reversible hydration of carbon dioxide. Can hydrates cyanamide to urea. Involved in the regulation of fluid secretion into the anterior chamber of the eye.

**Subunit:**

Interacts with SLC4A4. Interaction with SLC4A7 regulates SLC4A7 transporter activity.

**Subcellular Location:**

Cytoplasm.

**DISEASE:**

Defects in CA2 are the cause of osteopetrosis autosomal recessive type 3 (OPTB3) [MIM:259730]; also known as osteopetrosis with renal tubular acidosis, carbonic anhydrase II deficiency syndrome, Guibaud-Vainsel syndrome or marble brain disease. Osteopetrosis is a rare genetic disease characterized by abnormally dense bone, due to defective resorption of immature bone. The disorder occurs in two forms: a severe autosomal recessive form occurring in utero, infancy, or childhood, and a benign autosomal dominant form occurring in adolescence or adulthood. Autosomal recessive osteopetrosis is usually associated with normal or elevated amount of non-functional osteoclasts. OPTB3 is associated with renal tubular acidosis, cerebral calcification (marble brain disease) and in some cases with mental retardation.

**Similarity:**

Belongs to the alpha-carbonic anhydrase family.

**SWISS:**

P00918

**Gene ID:**

760

**Database links:**

[Entrez Gene: 760](#)Human

[Entrez Gene: 12349](#)Mouse

[Omim: 611492](#)Human

[SwissProt: P00918](#)Human

[SwissProt: P00920](#)Mouse

[Unigene: 155097](#)Human

[Unigene: 1186](#)Mouse

**Important Note:**

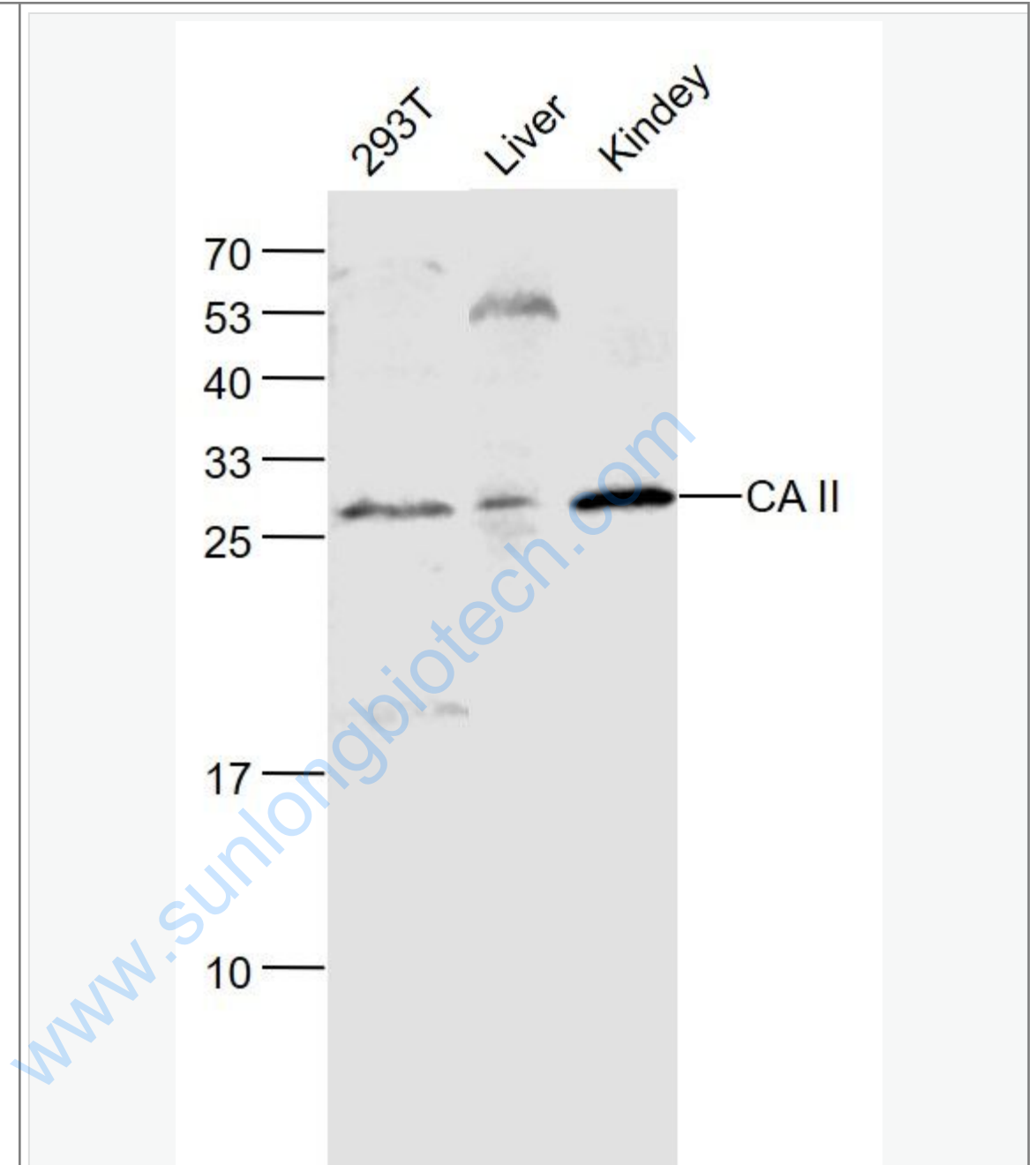
This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

CA2(Carbonic

anhydrase1)也是红细胞的主要蛋白质成分之一,是一种重要的锌酶,对血液及组织起到维持酸碱平衡的作用,协助体内组织排除二氧化碳,碳酸酐酶 II 参与呼吸、钙化、酸碱平衡、骨吸收和各种体液形成的生理过程.

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Picture:



Sample:

293T(Human) Cell Lysate at 30 ug

Liver (Mouse) Lysate at 40 ug

Kindey (Mouse) Lysate at 40 ug

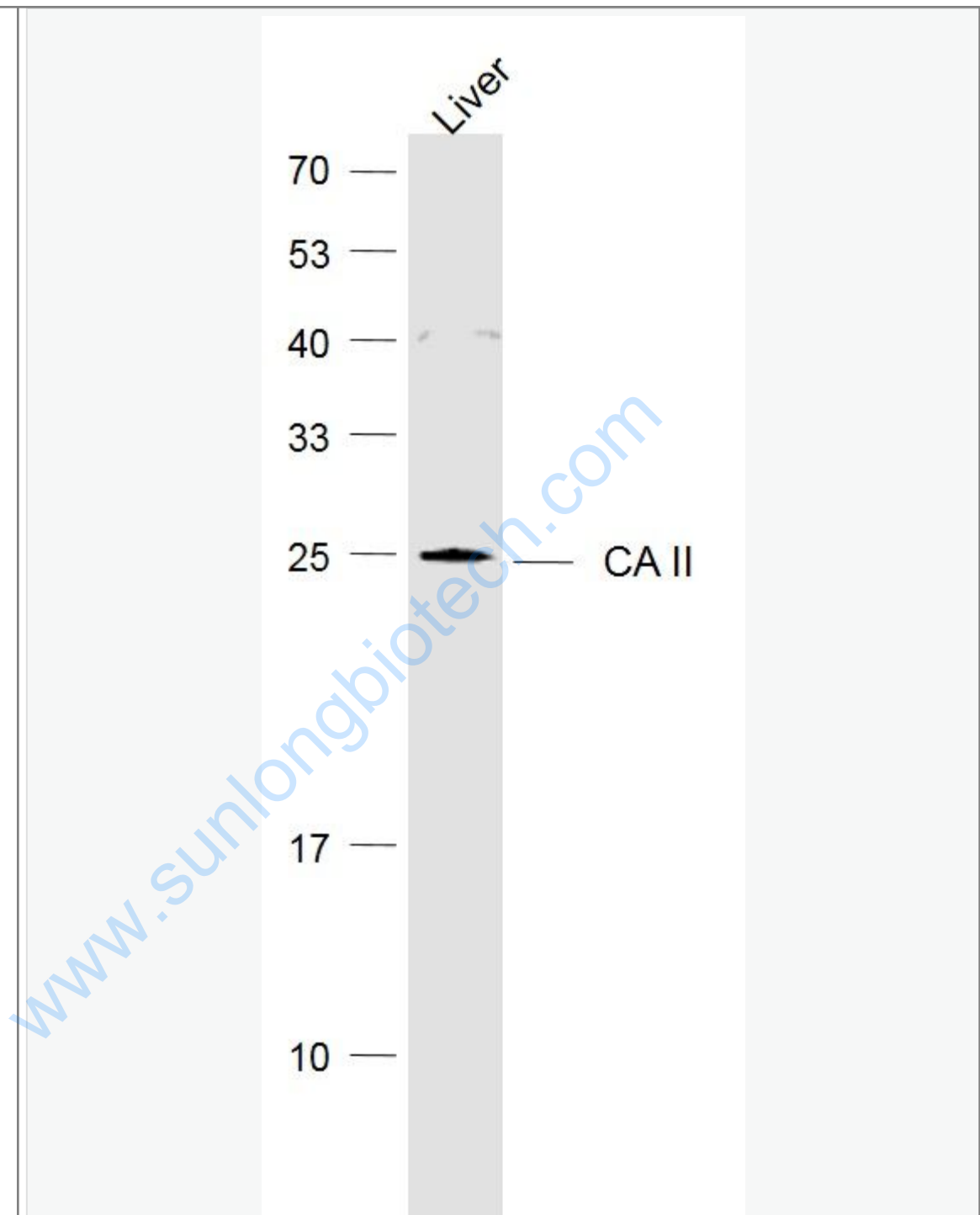
Primary: Anti- CA II (SL21856R) at 1/1000 dilution

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

Predicted band size: 29 kD

Observed band size: 29 kD

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Sample:

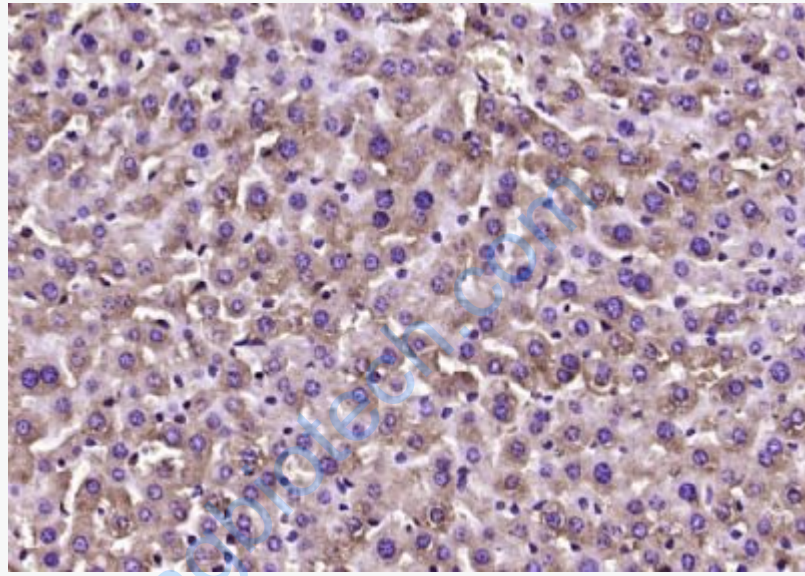
Liver (Mouse) Lysate at 40 ug

Primary: Anti-CA II (SL21856R) at 1/1000 dilution

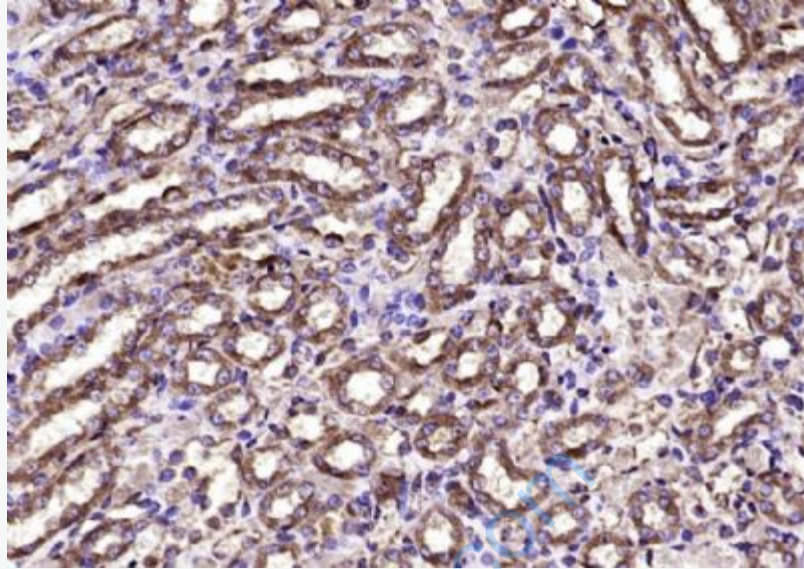
Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

Predicted band size: 29 kD

Observed band size: 29 kD

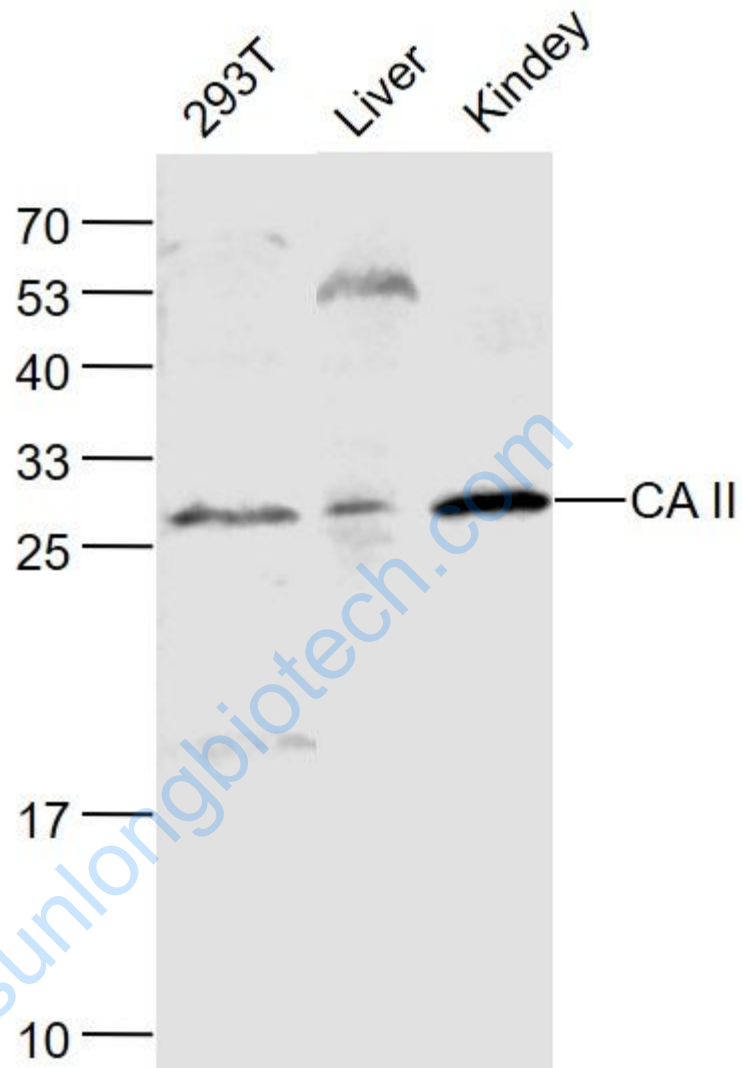


Paraformaldehyde-fixed, paraffin embedded (mouse liver); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (CA II) Polyclonal Antibody, Unconjugated (SL21856R) at 1:200 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructions and DAB staining.



Paraformaldehyde-fixed, paraffin embedded (rat 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 (CA II) Polyclonal Antibody, Unconjugated (SL21856R) at 1:200 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructions and DAB staining.





Paraformaldehyde-fixed, paraffin embedded (rat 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 (CA II) Polyclonal Antibody, Unconjugated (SL21856R) at 1:200 overnight at 4°C, followed by operating according to SP

Kit(Rabbit) (sp-0023) instructions and DAB staining.

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