

Anti-Superoxide Dismutase 4/CCS Antibody Picoband®

Catalog Number: A00314-1

About CCS

Copper chaperone for superoxide dismutase is a metalloprotein that is responsible for the delivery of Cu to superoxide dismutase (SOD1). In humans the protein is encoded by the CCS gene. And this gene is mapped to chromosome 11q13 by fluorescence in situ hybridization. The CCS protein is present in mammals and most eukaryotes including yeast. The structure of CCS is composed of three distinct domains that are necessary for its function. Although CCS is important for many organisms, there are CCS independent pathways for SOD1, and many species lack CCS all together, such as *C. elegans*.

Overview

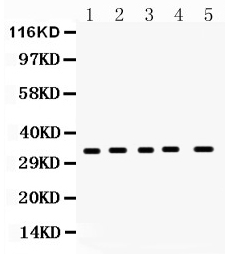
Product Name	Anti-Superoxide Dismutase 4/CCS Antibody Picoband®
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-Superoxide Dismutase 4/CCS Antibody Picoband® catalog # A00314-1. Tested in IHC, WB applications. This antibody reacts with Human, Mouse, Rat. The brand Picoband indicates this is a premium antibody that guarantees superior quality, high affinity, and strong signals with minimal background in Western blot applications. Only our best-performing antibodies are designated as Picoband, ensuring unmatched performance.
Application	IHC, WB
Clonality	Polyclonal
Formulation	Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na ₂ HPO ₄ , 0.05mg NaN ₃ .
Storage Instructions	Store at -20°C for one year from date of receipt. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for six months. Avoid repeated freeze-thaw cycles.
Host	Rabbit
Uniprot ID	O14618

Technical Details

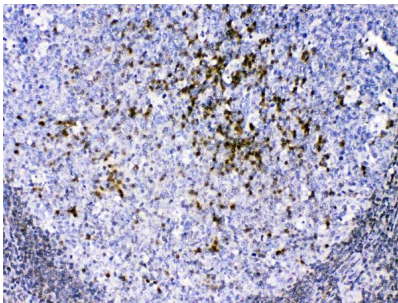
Immunogen	A synthetic peptide corresponding to a sequence at the C-terminus of human CCS, different from the related mouse sequence by six amino acids, and from the related rat sequence by seven amino acids.
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (SV0002-1) for IHC(P).
Cross Reactivity	No cross-reactivity with other proteins
Isotype	Rabbit IgG
Form	Lyophilized

Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
Purification	Immunogen affinity purified.
Suggested Dilutions	Immunohistochemistry (Paraffin-embedded Section), 0.5-1ug/ml, Human Western blot, 0.1-0.5ug/ml, Human, Mouse, Rat

Anti-Superoxide Dismutase 4/CCS Antibody Picoband® (A00314-1) Images



Western blot analysis of CCS using anti-CCS antibody (A00314-1). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions. Lane 1: rat brain tissue lysate, Lane 2: rat spleen tissue lysates, Lane 3: mouse brain tissue lysates, Lane 4: mouse spleen tissue lysates, Lane 5: 293T whole cell lysates. After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA for 50-90 minutes. Blocked the membrane with 5% Non-fat Milk/ TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-CCS antigen affinity purified polyclonal antibody (Catalog # A00314-1) at 0.5 ug/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002) with Tanon 5200 system. A specific band was detected for CCS at approximately 34KD. The expected band size for CCS is at 29KD.



IHC analysis of CCS using anti-CCS antibody (A00314-1). CCS was detected in paraffin-embedded section of human tonsil tissues. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-CCS Antibody (A00314-1) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.

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