10320 Camino Santa Fe, Suite G
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Anti-CBS Antibody Picoband™ (monoclonal, 7C3B7)

Catalog # ABO16605

Specification

Anti-CBS Antibody Picoband™ (monoclonal, 7C3B7) - Product Information

Application	**WB**
Primary Accession	P35520
Host	**Mouse**
Isotype	**Mouse IgG2b**
Reactivity	**Rat, Human, Mouse**
Clonality	**Monoclonal**
Format	**Lyophilized**

Description
Anti-CBS Antibody Picoband™ (monoclonal, 7C3B7) . Tested in WB applications. This antibody reacts with Human, Mouse, Rat.

Reconstitution
Adding 0.2 ml of distilled water will yield a concentration of 500 µg/ml.

Anti-CBS Antibody Picoband™ (monoclonal, 7C3B7) - Additional Information

Gene ID 102724560;875

Other Names
Cystathionine beta-synthase, 4.2.1.22, Beta-thionase, Serine sulfhydrase, CBS

Calculated MW
61 kDa KDa

Application Details
Western blot, 0.25-0.5 µg/ml, Human, Mouse, Rat

Contents
Each vial contains 4 mg Trehalose, 0.9 mg NaCl and 0.2 mg Na2HPO4.

Immunogen
E.coli-derived human CBS recombinant protein (Position: K102-E342).

Purification
Immunogen affinity purified.

Storage	**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 freezing and thawing.**

Anti-CBS Antibody Picoband™ (monoclonal, 7C3B7) - Protein Information

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Name CBS

Function
Hydro-lyase catalyzing the first step of the transsulfuration pathway, where the hydroxyl group of L-serine is displaced by L- homocysteine in a beta-replacement reaction to form L-cystathionine, the precursor of L-cysteine. This catabolic route allows the elimination of L-methionine and the toxic metabolite L-homocysteine (PubMed:20506325, PubMed:23974653, PubMed:23981774). Also involved in the production of hydrogen sulfide, a gasotransmitter with signaling and cytoprotective effects on neurons (By similarity).

Cellular Location
Cytoplasm. Nucleus

Tissue Location
In the adult strongly expressed in liver and pancreas, some expression in heart and brain, weak expression in lung and kidney. In the fetus, expressed in brain, liver and kidney

Anti-CBS Antibody Picoband™ (monoclonal, 7C3B7) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Anti-CBS Antibody Picoband™ (monoclonal, 7C3B7) - Images

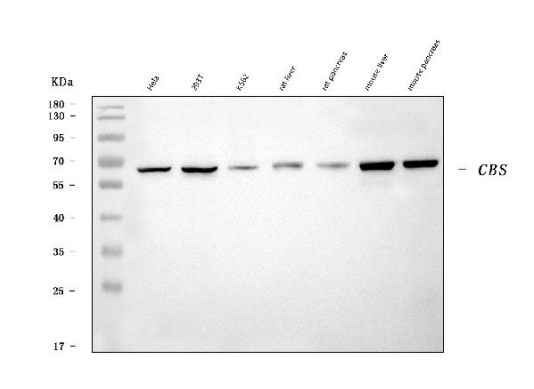

Figure 1. Western blot analysis of CBS using anti-CBS antibody (M00130-2).
Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions.
Lane 1: human Hela whole cell lysates,
Lane 2: human 293T whole cell lysates,
Lane 3: human K562 whole cell lysates,

Lane 4: rat liver tissue lysates,
Lane 5: rat pancreas tissue lysates,
Lane 6: mouse liver tissue lysates,
Lane 7: mouse pancreas tissue lysates.
After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with mouse anti-CBS antigen affinity purified monoclonal antibody (Catalog # M00130-2) at 0.5 µg/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-mouse 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 # EK1001) with Tanon 5200 system. A specific band was detected for CBS at approximately 61 kDa. The expected band size for CBS is at 61 kDa.

Anti-CBS Antibody Picoband™ (monoclonal, 7C3B7) - Background

CBS, Cystathionine Beta-Synthase, catalyzes the first irreversible step of transsulfuration. The CBS enzyme is a homotetramer of 63-kD subunits and requires pyridoxal phosphate and heme for activity. The CBS gene, which is mapped to chromosome 21q22, contains 23 exons, ranging in size from 42 to 299 bp. The human CBS protein can substitute for the endogenous yeast CBS protein in Saccharomyces cerevisiae. The catalytic domain of the CBS protein is located in the N-terminal 409 amino acids, and a regulatory domain is located in the C-terminal 142 amino acids.A mutation that deletes the C-terminal 145 amino acids of CBS could restore activity of several CBS mutant alleles found in homocystinurics.