10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

CBS Antibody (Center)
Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP6959c

Specification

CBS Antibody (Center) - Product Information

Application	**WB, IHC-P-Leica, FC, IF,E**
Primary Accession	P35520
Other Accession	Q58H57, P0DN79
Reactivity	**Human, Mouse, Rat**
Predicted	**Monkey**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Antigen Region	**301-330**

CBS Antibody (Center) - Additional Information

Gene ID 102724560;875

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

Target/Specificity
This CBS antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 301-330 amino acids from the Central region of human CBS.

Dilution
WB~~1:2000
IHC-P-Leica~~1:500
FC~~1:25
IF~~1:25
E~~Use at an assay dependent concentration.

Format
Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

Storage
Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
CBS Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

CBS Antibody (Center) - 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

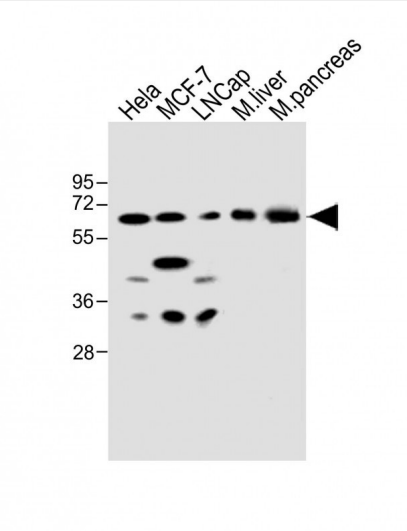
Tissue Location
In the adult strongly expressed in liver and pancreas, some expression in heart and brain, weak expression in lung and kidney. In the fetus, expressed in brain, liver and kidney

CBS Antibody (Center) - 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

CBS Antibody (Center) - Images



All lanes : Anti-CBS Antibody (Center) at 1:500 dilution Lane 1: Hela whole cell lysate Lane 2: MCF-7 whole cell lysate Lane 3: LNCap whole cell lysate Lane 4: mouse liver lysate Lane 5: mouse pancreas lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 61 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

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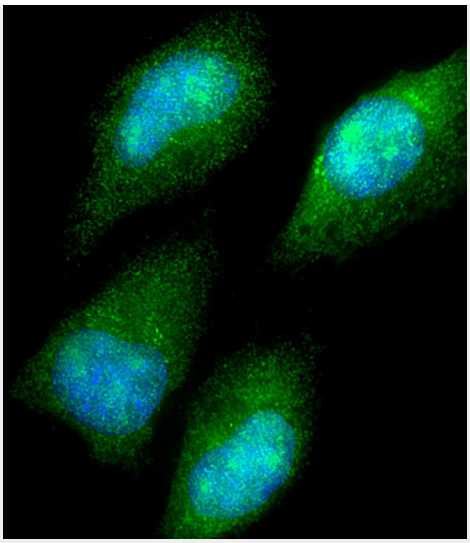
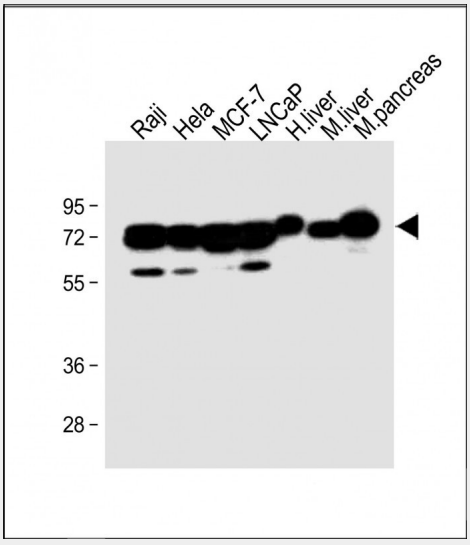


Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized HeLa (human cervical epithelial adenocarcinoma cell line) cells labeling CBS with AP6959c at 1/25 dilution, followed by Dylight® 488-conjugated goat anti-rabbit IgG (NK179883) secondary antibody at 1/200 dilution (green). Immunofluorescence image showing cytoplasm and nucleus staining on HeLa cell line. The nuclear counter stain is DAPI (blue).



All lanes : Anti-CBS Antibody (Center) at 1:2000 dilution Lane 1: Raji whole cell lysate Lane 2: Hela whole cell lysate Lane 3: MCF-7 whole cell lysate Lane 4: LNCaP whole cell lysate Lane 5: Human liver lysate Lane 6: Mouse liver lysate Lane 7: Mouse pancreas lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 61 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

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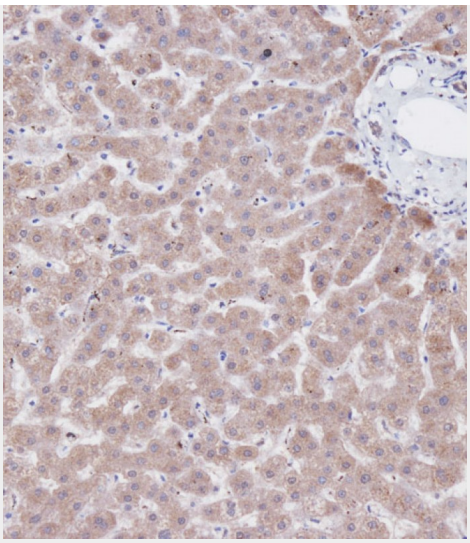
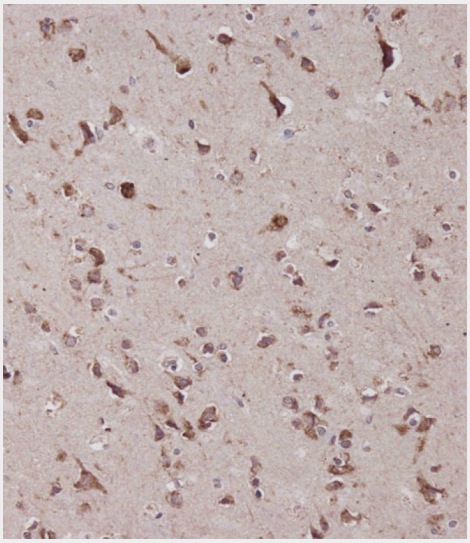


Immunohistochemical analysis of AP6959C on paraffin-embedded Human liver tissue was performed on the Leica® BOND RXm. Tissue was fixed with formaldehyde at room temperature. Heat induced epitope retrieval was performed by EDTA buffer (pH9. 0). Samples were incubated with primary antibody(1:500) for 15min at room temperature. Leica Bond Polymer Refine Detection was used as the secondary antibody.



Immunohistochemical analysis of AP6959C on paraffin-embedded Human brain tissue was performed on the Leica® BOND RXm. Tissue was fixed with formaldehyde at room temperature. Heat induced epitope retrieval was performed by EDTA buffer (pH9. 0). Samples were incubated with primary antibody(1:500) for 15min at room temperature. Leica Bond Polymer Refine Detection was used as the secondary antibody.

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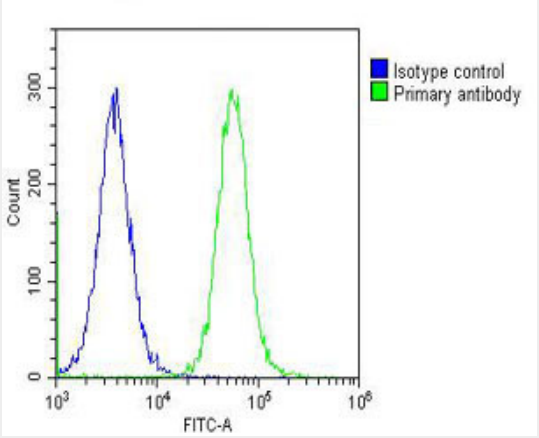

Overlay histogram showing Hela cells stained with AP6959c (green line). The cells were fixed with 2% paraformaldehyde (10 min) and then permeabilized with 90% methanol for 10 min. The cells were then icubated in 2% bovine serum albumin to block non-specific protein-protein interactions followed by the antibody (AP6959c, 1:25 dilution) for 60 min at 37ºC. The secondary antibody used was Goat-Anti-Rabbit IgG, DyLight® 488 Conjugated Highly Cross-Adsorbed(OH191631) at 1/200 dilution for 40 min at 37ºC. Isotype control antibody (blue line) was rabbit IgG (1µg/1x10^6 cells) used under the same conditions. Acquisition of >10, 000 events was performed.

CBS Antibody (Center) - Background

CBS acts as a homotetramer to catalyze the conversion of homocysteine to cystathionine, the first step in the transsulfuration pathway. This protein is allosterically activated by adenosyl-methionine and uses pyridoxal phosphate as a cofactor. Defects in this gene can cause cystathionine beta-synthase deficiency (CBSD), which can lead to homocystinuria.

CBS Antibody (Center) - References

Ravel,C., et.al., PLoS ONE 4 (8), E6540 (2009)

CBS Antibody (Center) - Citations

- Endogenous HS producing enzymes are involved in apoptosis induction in clear cell renal cell carcinoma.