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CBS Antibody (N-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP6959A

Product Information

Application	WB, IHC-P, FC, IF, E
Primary Accession	P35520
Reactivity	Human, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	60587
Antigen Region	104-133

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 104-133 amino acids from the N-terminal region of human CBS.
Dilution	WB~~1:1000 IHC-P~~1:100~500 FC~~1:10~50 IF~~1:10~50 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 (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

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

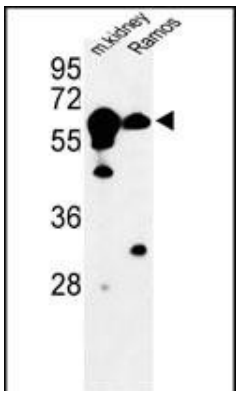
Background

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.

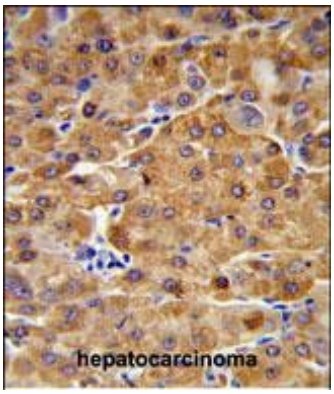
References

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

Images

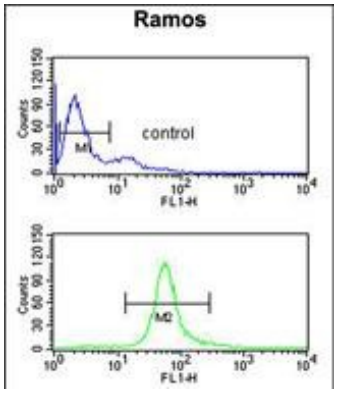


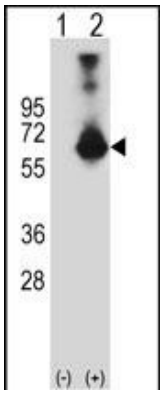
Western blot analysis of CBS Antibody (N-term) (Cat. #AP6959a) in mouse kidney tissue and Ramos cell line lysates (35ug/lane). CBS (arrow) was detected using the purified Pab.



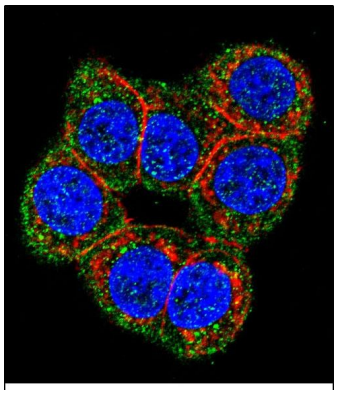
CBS Antibody (N-term) (Cat. #AP6959a) IHC analysis in formalin fixed and paraffin embedded human hepatocarcinoma followed by peroxidase conjugation of the secondary antibody and DAB staining. This data demonstrates the use of the CBS Antibody (N-term) for immunohistochemistry. Clinical relevance has not been evaluated.

CBS Antibody (N-term) (Cat. #AP6959a) flow cytometric analysis of Ramos cells (bottom histogram) compared to a negative control cell (top histogram).FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.





Western blot analysis of CBS (arrow) using rabbit polyclonal CBS Antibody (N-term) (Cat. #AP6959a). 293 cell lysates (2 ug/lane) either nontransfected (Lane 1) or transiently transfected (Lane 2) with the CBS gene.



Confocal immunofluorescent analysis of CBS Antibody (N-term)(Cat#AP6959a) with 293 cell followed by Alexa Fluor 488-conjugated goat anti-rabbit lgG (green). Actin filaments have been labeled with Alexa Fluor 555 phalloidin (red).DAPI was used to stain the cell nuclear (blue).

Citations

- Tadalafil Integrates Nitric Oxide-Hydrogen Sulfide Signaling to Inhibit High Glucose-induced Matrix Protein Synthesis in Podocytes.
- Hydrogen sulfide inhibits high glucose-induced matrix protein synthesis by activating AMP-activated protein kinase in renal epithelial cells.