CBS Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

Product Name	CBS, Polyclonal Antibody
Full Product Name	CBS, ID (Cystathionine beta-synthase, Serine Sulfhydrase, Beta-thionase) (MaxLight 650)
Product Gene Name	anti-CBS antibody
Clonality	Polyclonal
Isotype	IgG
Host	Rabbit
Species Reactivity	Human, Rat
Form/Format	Supplied as a liquid in PBS, pH 7.2. No preservative added. Labeled with MaxLight650.
Purity/Purification	Purified by Protein A Affinity Chromatography
Specificity	Recognizes human CBS. Species Crossreactivity: rat
Preparation and Storage	Store product at 4 degree C in the dark. DO NOT FREEZE! Stable at 4 degree C for 12 months after receipt as an undiluted liquid. Dilute required amount only prior to immediate use. Further dilutions can be made in assay buffer. Caution: MaxLight650 conjugates are sensitive to light. For maximum recovery of product, centrifuge the original vial prior to removing the cap.
Molecular Weight	61,863 Da
OMIM	phenotype 613381
3D Structure	ModBase 3D Structure for P35520
Immunogen	KLH-conjugated synthetic peptide mapping to a fragment of residues within amino acids 301-330 in the C-terminal region of human CBS, UniProt Accession #P35520. Species sequence homology: monkey
Conjugate	MaxLight650
Note	Preservative Free
Product Categories/Family for anti-CBS antibody	Antibodies; Enzymes; Synthase
Applications Tested/Suitable for anti-CBS antibody	FLISA, Flow Cytometry (FC/FACS), Western Blot (WB), Immunofluorescence (IF), Immunohistochemistry (IHC) Paraffin
Application Notes for anti-CBS antibody	FC/FACS: 1:10-1:50 WB: 1:1000 IF: 1:10-1:50 IHC-P: 1:10-1:50 Applications are based on unconjugated antibody.
Related Product Information for anti-CBS antibody	MBS6471391 is an antibody targeting CBS. Also known as CBS, ID (Cystathionine beta-synthase, Serine Sulfhydrase, Beta-thionase) (MaxLight 650). Reactive in Human, Rat. Host: Rabbit.
Product References and Citations for anti-CBS antibody	1. Ravel, C., et.al., PLoS ONE 4(8), E6540 (2009).
Other Notes	Small volumes of anti-CBS antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for CBS. It may not necessarily be applicable to this product.

NCBI GI #	4557415
NCBI GeneID	875
NCBI Accession #	NP_000062.1
UniProt Primary Accession #	P35520
UniProt Secondary Accession #	Q99425; Q9BWC5; B2R993; D3DSK4
UniProt Related Accession #	P35520
GenBank Nucleotide #	NM_000071.2
NCBI Official Full Name	cystathionine beta-synthase
NCBI Official Synonym Full Names	cystathionine-beta-synthase
NCBI Official Symbol	CBS
NCBI Official Synonym Symbols	HIP4
UniProt Protein Name	Cystathionine beta-synthase
UniProt Synonym Protein Names	Beta-thionase; Serine sulfhydrase
Protein Family	Cystathionine beta-synthase
UniProt Gene Name	CBS
UniProt Entry Name	CBS_HUMAN
NCBI Protein Information	cystathionine beta-synthase; beta-thionase; serine sulfhydrase; methylcysteine synthase
NCBI Summary for CBS	The protein encoded by this gene acts as a homotetramer to catalyze the conversion of homocysteine to cystathionine, the first step in the transsulfuration pathway. The encoded 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. Multiple alternatively spliced transcript variants have been found for this gene. [provided by RefSeq, May 2010]

UniProt Comments for CBS	CBS: Only known pyridoxal phosphate-dependent enzyme that contains heme. Important regulator of hydrogen sulfide, especially in the brain, utilizing cysteine instead of serine to catalyze the formation of hydrogen sulfide. Hydrogen sulfide is a gastratransmitter with signaling and cytoprotective effects such as acting as a neuromodulator in the brain to protect neurons against hypoxic injury. Defects in CBS are the cause of cystathionine beta- synthase deficiency (CBSD). CBSD is an enzymatic deficiency resulting in altered sulfur metabolism and homocystinuria. The clinical features of untreated homocystinuria due to CBS deficiency include myopia, ectopia lentis, mental retardation, skeletal anomalies resembling Marfan syndrome, and thromboembolic events. Light skin and hair can also be present. Biochemical features include increased urinary homocystine and methionine. Belongs to the cysteine synthase/cystathionine beta- synthase family. 2 isoforms of the human protein are produced by alternative splicing. Protein type: Other Amino Acids Metabolism - selenoamino acid; Amino Acid Metabolism - cysteine and methionine; Amino Acid Metabolism - glycine, serine and threonine; Lyase; EC 4.2.1.22 Chromosomal Location of Human Ortholog: 21q22.3 Cellular Component: intracellular membrane-bound organelle; nucleolus; nucleus; cytosol Molecular Function: identical protein binding; protein binding; protein homodimerization activity; enzyme binding; cystathionine beta-synthase activity; ubiquitin protein ligase binding; metal ion binding; heme binding; pyridoxal phosphate binding Biological Process: cysteine biosynthetic process via cystathionine; homocysteine catabolic process; sulfur amino acid metabolic process; L-serine metabolic process; transsulfuration; cysteine biosynthetic process from serine; homocysteine metabolic process; L-serine catabolic process; L-cysteine catabolic process Disease: Homocystinuria Due To Cystathionine Beta-synthase Deficiency
Research Articles on CBS	**1.** Results are the first suggesting a possible association between T833C polymorphism (rs5742905) of the CBS gene and bipolar disorder; data were unable to confirm an association between bipolar disorder and C677T polymorphism (rs1801133) of the MTHFR gene
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