

**Cystathionine  $\beta$  Synthase, human recombinant protein**  
**Beta-thionase, methylcysteine synthase, serine sulfhydrase**  
**Catalog # PBV11403r****Specification**

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**Cystathionine  $\beta$  Synthase, human recombinant protein - Product info**

Primary Accession	<a href="#">P35520</a>
Concentration	0.5
Calculated MW	61.9 kDa (1-551 aa, NT His Tag) kDa

**Cystathionine  $\beta$  Synthase, human recombinant protein - Additional Info**

Gene ID	102724560.
Gene Symbol	CBS
<b>Other Names</b>	
Beta-thionase, methylcysteine synthase, serine sulfhydrase	
Gene Source	Human
Source	E. coli
Assay&Purity	SDS-PAGE; $\geq 90\%$
Assay2&Purity2	N/A;
Recombinant	Yes
Results	100 U/mg
Sequence	1-551 aa
<b>Target/Specificity</b>	
Cystathionine $\beta$ Synthase	

**Format**

Liquid

**Storage**

-20°C; 0.5 mg/ml in 50 mM Tris, 100 mM NaCl, pH 8.0 and 20% glycerol

**Cystathionine  $\beta$  Synthase, human recombinant protein - Protocols**

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

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

**Cystathionine  $\beta$  Synthase, human recombinant protein - Images****Cystathionine  $\beta$  Synthase, human recombinant protein - Background**

Cystathionine  $\beta$ -synthase (CBS; E.C. 4.2.1.22) is a PLP-dependent enzyme which plays a central role in sulfur amino acid metabolism in eukaryotes. CBS catalyzes condensation between serine and homocysteine to generate cystathionine, which is then further processed by cystathionine  $\gamma$ -lyase to yield cysteine. The gene encoding CBS is essentially linked to the genetic disorders of homocystinuria and Down syndrome. Homocystinuria is an autosomal recessive disease, characterized by high plasma levels of homocysteine, with clinical manifestations including mental retardation, thromboembolism and connective tissue defects. In addition, CBS also mediates synthesis of hydrogen sulfide by catalyzing condensation between cysteine and homocysteine. CBS is highly expressed in the nervous system, liver and kidney and is responsible for up to 95% of the H<sub>2</sub>S production in the brain.

#### **Cystathionine $\beta$ Synthase, human recombinant protein - References**

- Kraus J.P., et al. Hum. Mol. Genet. 2:1633-1638(1993).  
Chasse J.-F., et al. Biochem. Biophys. Res. Commun. 211:826-832(1995).  
Kruger W.D., et al. Proc. Natl. Acad. Sci. U.S.A. 91:6614-6618(1994).  
Chasse J.-F., et al. Mamm. Genome 8:917-921(1997).  
Kraus J.P., et al. Genomics 52:312-324(1998).