Creative Enzymes
Diagnostic Enzymes

Native Cystathionine-β-synthase

Product Information

Cat#	DIA-272
Similar	CBS
Description	Cystathionine-β-synthase, also known as CBS, is an enzyme (EC 4.2.1.22) that in humans is encoded by the CBS gene. CBS uses the cofactor pyridoxal-phosphate (PLP) and can be allosterically regulated by effectors such as the ubiquitous cofactor S-adenosyl-L-methionine (adoMet). This enzyme belongs to the family of lyases, to be specific, the hydro-lyases, which cleave carbon-oxygen bonds. CBS is a multidomain enzyme composed of an N-terminal enzymatic domain and two CBS domains. The CBS gene is the most common locus for mutations associated with homocystinuria.
CAS No.	9023-99-8
Synonyms	Cystathionine-β-synthase; CBS; EC 4.2.1.22; 9023-99-8
Enzyme Commission Number	EC 4.2.1.22
Abbr	CBS
Alias	CBS
Product Overview	Human CBS performs a crucial step in the biosynthetic pathway of cysteine by providing a regulatory control point for adoMet . L-homocysteine, after being methylated to methionine, can be converted to adoMet, which donates methyl groups to a variety of substrates, e.g., neurotransmitters, proteins, and nucleic acids. In mammals, CBS is a highly regulated enzyme, which contains a heme cofactor that functions as a redox sensor, that can modulate its activity in response to changes in the redox potential. If the resting form of CBS in the cell has ferrous heme, the potential exists for activating the enzyme under oxidizing conditions by conversion to the ferric state.

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