

## Cystathionine $\beta$ Synthase Activity Assay Kit (Fluorometric)

### Product Information

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**Cat**

Kit-1113

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**Description**

Cystathionine  $\beta$  Synthase (EC 4.2.1.22, C $\beta$ S) is a PLP-dependent enzyme that catalyzes the formation of H<sub>2</sub>S and cystathionine when using cysteine and homocysteine as substrates. Known for its role in human sulfur metabolism, mutations in the gene encoding C $\beta$ S can result in high concentrations of homocysteine in plasma. Elevated circulating concentrations of homocysteine result in genetic disorders including Homocysteinuria and Down syndrome. Specifically, Homocysteinuria is an autosomal recessive disease with clinical manifestations including mental retardation, thromboembolism and connective tissue defects. Hydrogen sulfide, C $\beta$ S product, is an important gaseous mediator, like nitric oxide, that has significant effects on the immunological, neurological, cardiovascular and pulmonary systems of mammals. Cystathionine  $\beta$  Synthase Assay Kit utilizes cysteine and homocysteine as substrates to produce H<sub>2</sub>S. Hydrogen sulfide reacts with the azido-functional group of the fluorescent probe yielding a fluorescent amino group (Ex/Em = 368/460 nm). The assay is highly sensitive, has a simple easy-to-follow protocol, and can detect as low as 1.45 mU of C $\beta$ S activity.

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**Applications**

Rapid assessment of native/recombinant C $\beta$ S and C $\beta$ S activity in mammalian samples

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**Storage**

-20°C

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**Shipping**

Gel Pack

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**Size**

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## Cystathionine $\gamma$ Synthase Activity Assay Kit (Fluorometric)

100 assays

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### Kit Components

C $\beta$ S Assay Buffer; C $\beta$ S Probe (in DMSO); C $\beta$ S Substrate; Cofactor 1; Cofactor 2; Reducing Agent; AMC Standard (in DMSO, 1 mM); C $\beta$ S Positive Control

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### Target Species

Eukaryotes

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**Detection method** Fluorescence(Ex/Em 368/460 nm)

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### Features & Benefits

Simple, convenient, highly sensitive;

Fluorescent assay enables easy determination of C $\beta$ S activity in a variety of biological samples;

Kit includes a stable C $\beta$ S positive control

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