

Cystathione β Synthase Activity Assay Kit (Fluorometric)

Product Information

Cat

Kit-1113

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Description

Cystathione β Synthase (EC 4.2.1.22, C β S) is a PLP-dependent enzyme that catalyzes the formation of H₂S and cystathione when using cysteine and homocysteine as substrates. Known for its role in human sulfur metabolism, mutations in the gene encoding C β 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 β S product, is an important gaseous mediator, like nitric oxide, that has significant effects on the immunological, neurological, cardiovascular and pulmonary systems of mammals. Cystathione β Synthase Assay Kit utilizes cysteine and homocysteine as substrates to produce H₂S. 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 β S activity.

Applications

Rapid assessment of native/recombinant C β S and C β S activity in mammalian samples

Storage

-20°C

Shipping

Gel Pack

Size

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100 assays

Kit Components

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

Target Species

Eukaryotes

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

Features & Benefits

Simple, convenient, highly sensitive;

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

Kit includes a stable $\text{C}\beta\text{S}$ positive control
