CREATIVE BIOMART®
Assay Kit

DL-Serine Assay Kit (Fluorometric)

Product Information

Cat

Kit-0996

Common Name

Serine

Cat.No. Kit-0996

Description

Serine is one of the 20 naturally-occurring amino acids used by all organisms in the biosynthesis of proteins. Having a single chiral center, serine can exist as either of two stereoisomers (L-Serine and D-Serine). In addition to its role as a protein building block, L-Serine serves as a precursor to many vital biomolecules, including phosphatidylserine, sphingomyelin and the amino acids glycine and cysteine. The non-proteogenic isomer D-Serine is also synthesized from L-Serine in the mammalian brain. While most D-amino acids are only present in trace amounts in mammals, D-Serine is a vital neurotransmitter that acts as a co-agonist of synaptic N-methyl-D-aspartate (NMDA) type glutamate-gated ion channels. Impaired D-Serine metabolism may contribute to several neuropsychiatric disorders, including depression, schizophrenia, epilepsy and dementia. DL-Serine Assay Kit allows for quantification of both L- and D-Serine in biological fluids and tissues. The assay is based on the conversion of L-Serine to D-Serine, which is metabolized to an intermediate product that is subsequently oxidized and reacts with a probe to form a stable fluorophore (Ex/Em = 539/587 nm). Samples may be divided and assayed simultaneously for quantification of both D-Serine and total DL-Serine. The assay is not affected by physiological concentrations of other amino acids, is high-throughput adaptable and can detect less than 1 μM Serine.

Applications

Estimation of Serine in various biological samples

Storage

-20°C

Shipping

Tel: 1-631-559-9269 1-516-512-3133
Email:info@creative-biomart.org
Fax:1-631-938-8127
45-1 Ramsey Road, Shirley, NY 11967, USA

CREATIVE BIOMART®
Assay Kit

DL-Serine Assay Kit (Fluorometric)

Gel Pack

Size

100 assays

Kit Components

Serine Assay Buffer; Probe Solution; Serine Racemase Enzyme Mix; D-Serine Enzyme Mix; Developer Enzyme Mix; Sample Cleanup Mix; D-Serine Standard

Target Species

Mammalian

Detection method Fluorescence (Ex/Em 535/587 nm)

Features & Benefits

Simple, rapid & convenient assay; Limit of detection: 1 μM; Very specific, does not interact with other standard and non-standard amino acids

Tel: 1-631-559-9269 1-516-512-3133

Email:info@creative-biomart.org

Fax:1-631-938-8127

45-1 Ramsey Road, Shirley, NY 11967, USA