CREATIVE BIOMART®
Assay Kit

Aromatase (CYP19A) Activity Assay Kit (Fluorometric)

Product Information

Cat

Kit-1092

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Description

Aromatase (CYP19A, EC 1.14.14.14) is a member of the cytochrome P450 monooxidase (CYP) family of microsomal xenobiotic metabolism enzymes. Aromatase plays a critical role in steroidogenesis, catalyzing the conversion of androgenic hormones into estrogens. The enzyme is expressed in high levels in reproductive tissues, placenta, brain and adipose tissue and is responsible for mammalian sexual dimorphism and development of secondary sexual characteristics. Inhibitors of aromatase are used to treat estrogen-dependent breast cancer, as estrogens promote the expression of peptide growth factors responsible for tumorigenesis. Aromatase activity and expression can be affected by many organic environmental pollutants such as pesticides and plasticizers. Such compounds, known as endocrine disruptors, are suspected of causing precocious puberty, obesity, infertility and various cancers. Aromatase Activity Assay Kit enables rapid measurement of native or recombinant aromatase activity in biological samples such as placental microsomes. The assay utilizes a fluorogenic substrate that is converted into a highly fluorescent metabolite detected in the visible range (Ex/Em = 488/527 nm), ensuring a high signal-to-background ratio with little interference by autofluorescence. A highly selective aromatase inhibitor is provided for determination of aromatase activity in heterogeneous biological samples, where other CYP isozymes may contribute to substrate metabolism. The inhibitor displays greater than 100-fold selectivity for aromatase over other enzymes, ensuring targeted inhibition. Aromatase specific activity is calculated by running parallel reactions in the presence and absence of the inhibitor and subtracting any residual activity detected with the inhibitor present. The kit contains a complete set of reagents sufficient for 50 sets of paired reactions (in the presence and absence of inhibitor) and can detect a minimum of 25 nU aromatase activity.

Applications

Rapid assessment of native/recombinant Aromatase activity in lysates or microsomal fractions

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prepared from tissues, cells.
Screening of drugs and novel ligands for interaction with native/recombinant Aromatase.

Storage

-20°C

Shipping

Gel Pack

Size

100 assays

Kit Components

Aromatase Assay Buffer; Fluorescence Standard (1 mM); Aromatase Inhibitor (Letrozole); NADPH Generating System (100X); β-NADP+ Stock (100X); Aromatase Substrate; Recombinant Human Aromatase

Target Species

Eukaryotes

Detection method Fluorescence(Ex/Em 488/527 nm)

Features & Benefits

Simple, convenient, highly sensitive;
Fluorescent assay enables easy determination of Aromatase activity in a variety of biological samples;
The substrate shows low background and a high signal-to-noise ratio;
Kit includes Aromatase inhibitor, Letrozole, and a stable, recombinant human Aromatase as positive control

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