CREATIVE BIOMART®
Assay Kit

Acetylcholinesterase Fluorometric Detection Kit

Product Information

Cat.No. Kit-0035

Product Overview

A kit to determine acetylcholinesterase activity in red blood cells, saliva, or lysates using the natural substrate, acetylcholine. In addition, the use of specific inhibitors can be used to detect AChE activity in a variety of samples.

Description

Exposure to chemical nerve agents, pesticides and certain drugs (anesthetics, cocaine and therapeutical drugs) reduces the activity of red blood cell (RBC) acetylcholinesterase (AChE). The RBC-AChE can be used as a biomarker to monitor suppressed and or increased AChE function in the peripheral and central nervous system. Acetylcholinesterase (AChE) is one of the most important enzymes involved in nerve transmission. The enzyme is bound to cellular membranes of excitable tissue (synaptic junction, endoplasmic reticulum, etc). Acute toxicity to humans and animals through inhibition of AChE by both nerve gases and an important class of pesticides has long been a field of intensive scientific investigation. AChE inhibitors have also been used clinically as Alzheimer''s treatments (e.g., tacrine (tetrahydroaminoacridine)) and are the subject of increasing interest in various disease processes and treatment strategies. However, both environmental detection of AChE inhibitors and development of modulators of AChE enzymatic activity as drugs have been hampered by the difficulty and complexity of the current assay methods.

Applications

Fluorescence plate reader

Usage

1. For Research use only. Not for use in diagnostic procedures.2. Practice safe laboratory procedures by wearing protective clothing and eyewear.3. The fluorescent product of the detection reagent is not stable in the presence of thiols (DTT or 2-mercaptoethanol will interfere with the assay. See technical note1 below.4. NADH and glutathione (reduced form: GSH) will interfere with the assay.See Technical note 1.If you are going to use your own buffer keep the pH between

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7.0-8.0.

Storage

Long Term Storage: Store contents as labeled;Upon Arrival: -20°C

Kit Components

Reagent-Storage Temperature1. Component A: Detection Reagent Diluent, 5.5mL, -20°C;2. Component B: Coupled Enzyme Reagent, 5.5mL, -20°C;3. Component C: Detection Reagent, 1 Vial, -20°C;4. Component D: 5X Reaction Buffer, -20°C;5. Component E: Acetylcholine, -20°C;6. Component E: Reg Blood Cell Acetylcholinesterase, -20°C

Features & Benefits

1. Non Radioactive assay can monitor multiple time points to follow kinetics;2. One-step, no wash assay;3. Versatile: Can Detect AChE activity in RBC"s, Saliva and Tissue Lysates;4. Readout-96 well Fluorescent Plate Reader;

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