

Product datasheet

Acetylcholinesterase Assay Kit (Fluorometric - Green) ab138872

1 Image

Overview

Product name	Acetylcholinesterase Assay Kit (Fluorometric - Green)
Detection method	Fluorescent
Sample type	Cell culture extracts, Whole Blood
Assay type	Enzyme activity
Sensitivity	0.1 mU/ml
Species reactivity	Reacts with: Mammals, Other species
Product overview	<p>Acetylcholinesterase Assay Kit (Fluorometric - Green) (ab138872) uses an outstanding Thiol Green Indicator to quantify the thiocholine produced from the hydrolysis of acetylthiocholine by AChE in blood, in cell extracts, and in other solutions. Thiol Green Indicator is not fluorescent until reacted with a thiol group. It has spectral properties similar to those of fluorescein, making this assay compatible with almost every fluorescence instrument. The fluorescence intensity of Thiol Green Indicator is used to measure AChE activity. Compared to the existing thiol probes (e.g., mBBBr and bBBBr), Thiol Green Indicator is much more sensitive.</p>

This product is an optimized "mix-and-read" assay that provides an ultrasensitive fluorometric one-step protocol to detect as little as 0.01mU AChE in a 100 µl assay volume (0.1 mU/ml). The assay can be performed in a convenient 96-well or 384-well microtiter-plate format. Its signal can be easily read by a fluorescence microplate reader at Ex/Em = 490/520 nm.

Please note this product does not differentiate between acetylcholinesterase (AChE) or butyrylcholinesterase (BChE) activity as both enzymes can hydrolyze acetylcholine.

If you are looking for a colorimetric kit, we recommend [Acetylcholinesterase Assay Kit \(Colorimetric\) \(ab138871\)](#). If your plate reader has a filter to measure red fluorescence (Ex/Em = 540/590 nm), you can use [Acetylcholinesterase Assay Kit \(Fluorometric - Red\) \(ab138873\)](#).

Notes Acetylcholinesterase (AChE) is one of the most crucial enzymes for nerve response and function. AChE degrades the neurotransmitter acetylcholine (ACh) into choline and acetic acid. It is mainly

found at neuromuscular junctions and cholinergic synapses in the central nervous system, where its activity serves to terminate the synaptic transmission. AChE inhibitors are among the key drugs approved for Alzheimer's disease (AD) and myasthenia gravis.

Platform Microplate reader

Properties

Storage instructions Store at -20°C. Please refer to protocols.

Components	200 tests
Acetylcholinesterase Standard	1 vial
Acetylthiocholine	1 vial
Assay Buffer	1 x 25ml
DMSO	1 x 100µl
Thiol Green Indicator	1 vial

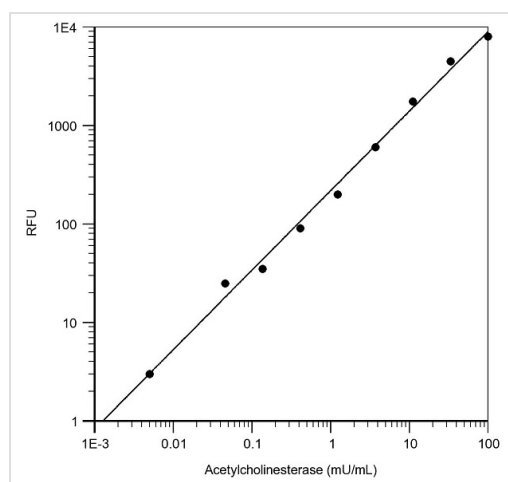
Function Terminates signal transduction at the neuromuscular junction by rapid hydrolysis of the acetylcholine released into the synaptic cleft. Role in neuronal apoptosis.

Tissue specificity Isoform H is highly expressed in erythrocytes.

Sequence similarities Belongs to the type-B carboxylesterase/lipase family.

Cellular localization Cell membrane; Cell junction > synapse. Secreted. Cell membrane and Nucleus. Only observed in apoptotic nuclei.

Images



Sample Standard Curve for Acetylcholinesterase

Acetylcholinesterase dose response was measured in a solid black 96-well plate with ab138872 using a fluorescence microplate reader. As low as 0.01 mU/well of acetylcholinesterase can be detected with 20 minutes incubation (n=3).

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