

## Product datasheet

# Acetylcholinesterase Assay Kit (Fluorometric -Red) ab138873

★★★★★ [1 Abreviews](#) [3 References](#) [3 Images](#)

### Overview

<b>Product name</b>	Acetylcholinesterase Assay Kit (Fluorometric -Red)
<b>Detection method</b>	Colorimetric/Fluorometric
<b>Sample type</b>	Serum, Plasma, Cell Lysate
<b>Assay type</b>	Enzyme activity
<b>Sensitivity</b>	0.1 mU/ml
<b>Assay time</b>	0h 20m
<b>Species reactivity</b>	<b>Reacts with:</b> Mammals, Other species
<b>Product overview</b>	Acetylcholinesterase Assay Kit (Fluorometric -Red) ( ab138873) uses a red indicator to quantify the choline produced from the hydrolysis of acetylcholine by AChE through choline oxidase-mediated enzyme coupling reactions.

The assay can be used for monitoring and quantifying AChE activity in blood, cell extracts or other solutions. The fluorescence intensity of the indicator is proportional to the amount of choline formed, which is proportional to the AChE activity.

The assay is an optimized “mix and read” assay using a simple one-step fluorometric protocol to detect as little as 0.01 mU AChE in a 100 µl assay volume (0.1 mU/ml). The assay can be performed in a 96-well or 384-well microtiter-plate format, and can be easily read with a fluorescence microplate reader at Ex/Em = 540/590 nm or with an absorbance microplate reader at OD = 575 nm.

Acetylcholinesterase assay protocol summary:

- add samples and standards to wells
- add assay mixture and incubate for 10-30 min
- analyze with microplate reader

### Notes

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 green fluorescence (Ex/Em = 490/520 nm), you can use **Acetylcholinesterase Assay Kit (Fluorometric - Green) (ab138872)**.

Platform

Microplate reader

Properties

Storage instructions

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

Components	200 tests
AbRed Indicator	1 vial
Acetylcholine	1 vial
Acetylcholinesterase Probe	2 units
Acetylcholinesterase Standard	1 vial
Assay Buffer	1 x 10ml
Dilution Buffer	1 x 10ml
DMSO	1 x 100µl

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.

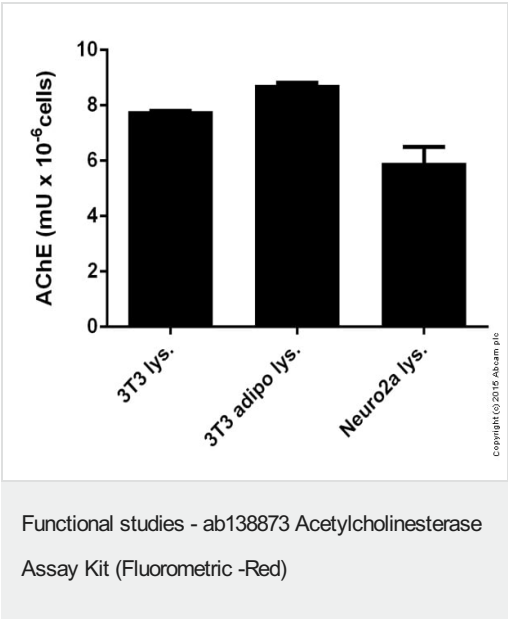
Sequence similarities

Belongs to the type-B carboxylesterase/lipase family.

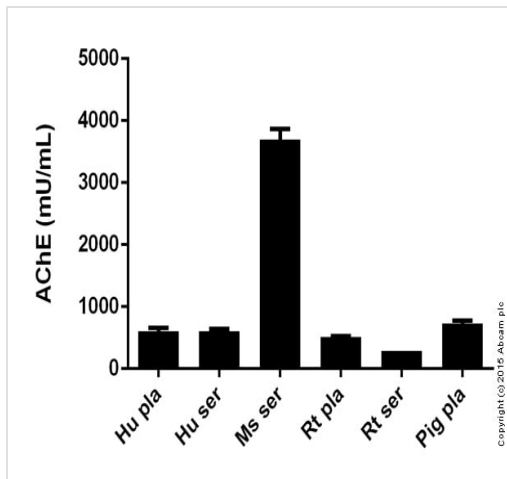
Cellular localization

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

Images

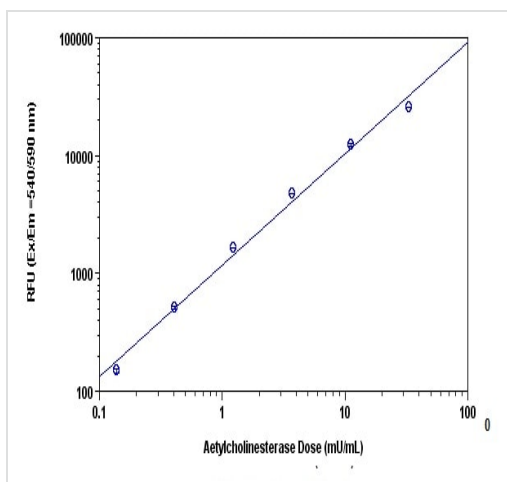


AChE measured in cell lysates showing activity per 1 million cells



AChE measured in various species showing activity per mL sample tested

Functional studies - ab138873 Acetylcholinesterase  
Assay Kit (Fluorometric -Red)



Sample Standard Curve for Acetylcholinesterase

Acetylcholinesterase dose response was measured in a solid black 96-well plate with ab138873 using a fluorescence microplate reader. As low as 0.01 mU/well (0.1 mU/ml) acetylcholinesterase can be detected with 20 minutes incubation (n=3).

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

### Our Abpromise to you: Quality guaranteed and expert technical support

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit <https://www.abcam.com/abpromise> or contact our technical team.

## Terms and conditions

---

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors