


Product datasheet

Choline/Acetylcholine Assay Kit ab65345

10 References 5 图像

概述

产品名称	Choline/Acetylcholine Assay试剂盒
样品类型	Cell culture supernatant, Urine, Serum, Plasma, Cell culture extracts, Other biological fluids, Tissue Extracts
检测类型	Quantitative
灵敏度	> 0.01 nmol/well
范围	0.01 nmol/well - 5 nmol/well
检测时间	0h 40m
种属反应性	与反应: Mouse, Human 预测可用于: Mammals 

产品概述

Choline/Acetylcholine Assay Kit (ab65345) provides a simple and sensitive means for quantifying Choline and Acetylcholine by either a colorimetric or fluorometric method. In the assay free choline is oxidized to betaine, via the intermediate betaine aldehyde. The reaction generates products which react with the Choline Probe to generate color ($\lambda = 570 \text{ nm}$), and fluorescence (Ex/Em 535/587 nm). Acetylcholine can be converted to choline by adding acetylcholinesterase to the reaction. The kit can detect choline and acetylcholine (total choline – free choline) in various biological samples such as in blood, cells, culture media, fermentation media, etc. There is no need for pretreatment or purification of samples. The kit can detect ~10 pmol-5 nmol of choline or acetylcholine.

Cells should be cultured in choline chloride free medium.

Visit our [FAQs page](#) for tips and troubleshooting.

说明

Choline and acetylcholine play important roles in many biological processes. Choline is an essential nutrient, commonly grouped with the B complex vitamins, that plays key roles in many biological processes. Choline is a precursor for the synthesis of acetylcholine (AChE), a critical neurotransmitter in both the periferial and central nervous systems.

If you need to purchase additional Choline Probe for this product, please see [ab139505](#).

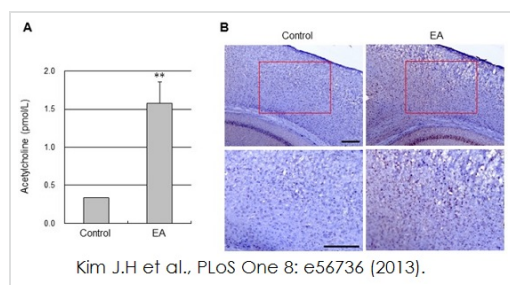
性能

存放说明	Store at -20°C. Please refer to protocols.
存储溶液	Preservative: None

组件	标识符	100 tests
Acetylcholinesterase	Blue	1 vial
Choline Assay Buffer	WM	1 x 25ml
Choline Enzyme Mix	Green	1 vial
Choline Probe (in DMSO)	Red	1 x 200µl
Choline Standard (5 µmol)	Yellow	1 vial

相关性 Choline and acetylcholine (often abbreviated ACh) play important roles in many biological processes. Choline is a natural amine, and is generally found in phosphatidylcholine and sphingomyelin, phospholipids abundant in cell membranes. Choline is also the precursor molecule for the neurotransmitter acetylcholine which is involved in many functions both in the peripheral nervous system (PNS) and in the central nervous system (CNS). In the PNS, ACh activates muscles and is a major neurotransmitter in the autonomic nervous system. In the CNS, ACh and the associated neurons form the cholinergic system, which tends to cause anti-excitatory actions.

图片

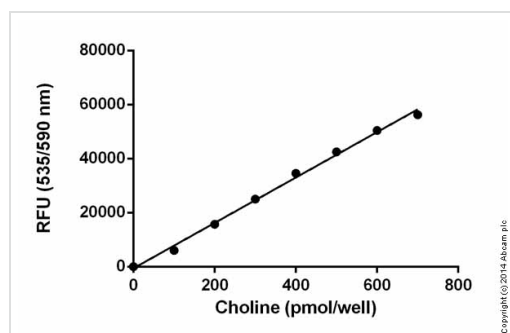


Functional studies- ab65345

Image from Kim J.H et al., PLoS One 8(2), Fig 4. doi: 10.1371/journal.pone.0056736.

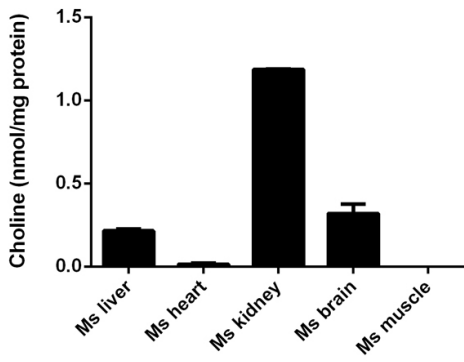
Acetylcholine levels from mouse brain tissue was measured using Acetylcholine assay kit (ab65345). Normal mice were anesthetized with thiopental sodium at 20minutes after the end of electroacupuncture (EA) treatment to determine levels of ACh (Figure A).

Immunohistochemical staining mAChR (muscarinic acetylcholine receptor) M3 in mouse cerebral cortex tissue 20 minutes after the end of EA treatment (Image B).



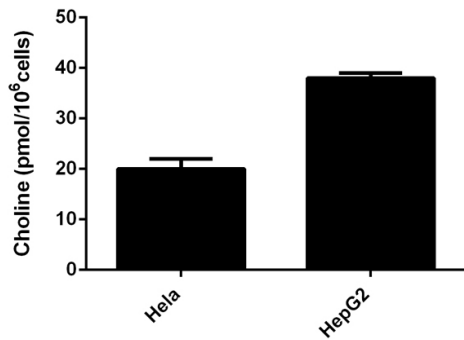
Functional Studies - Choline/Acetylcholine Assay

Kit (ab65345)



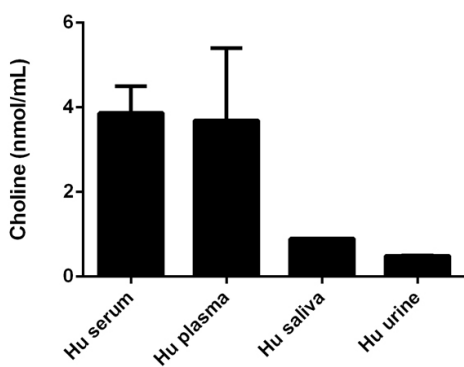
Choline measured fluorometrically in mouse tissue lysates showing quantity (nmol) per mg protein of tested sample

Functional Studies - Choline/Acetylcholine Assay Kit (ab65345)



Choline measured fluorometrically in cell lysates showing quantity (pmol) per 1 mln of tested cells

Functional Studies - Choline/Acetylcholine Assay Kit (ab65345)



Choline measured fluorometrically in biological fluids showing quantity (nmol) per mL of tested sample

Functional Studies - Choline/Acetylcholine Assay Kit (ab65345)

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