

Mitochondrial Aldehyde Dehydrogenase (ALDH2) Activity Assay Kit ab115348

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概述

产品名称 Mitochondrial Aldehyde Dehydrogenase (ALDH2) Activity Assay试剂盒

检测方法 Colorimetric

精确度 批次内

样品	n	Mean	SD	CV%
1	20			5%

批次间

样品	n	Mean	SD	CV%
1	4			12%

样品类型 Cell culture extracts, Tissue Extracts

检测类型 Enzyme activity

范围 60 µg/ml - 250 µg/ml

检测时间 4h 00m

种属反应性 **与反应:** Mouse, Rat, Cow, Dog, Human

产品概述 Mitochondrial Aldehyde Dehydrogenase (ALDH2) Activity Assay Kit ab115348 is used to determine mitochondrial aldehyde dehydrogenase activity (ALDH2) in a sample. The enzyme is captured within the wells of the microplate and activity is determined by following the production of NADH in the following ALDH2 catalyzed reaction:



The generation of NADH in the aldehyde dehydrogenase assay protocol is coupled to the 1:1 reduction of a reporter dye to yield a colored (yellow) reaction product whose concentration can be monitored by measuring the increase in absorbance at 450 nm (Dye molar extinction coefficient - 37000 M⁻¹cm⁻¹). ab115348 immunocaptures in each well only native ALDH2 from the chosen sample; this removes all other enzymes, including unrelated aldehyde dehydrogenases.

说明 Reagent dye, Coupler and NAD⁺ are shipped lyophilized. Before use rehydrate by adding 0.25

mL pure water to each tube and vortex each tube thoroughly to dissolve. After hydration unused amounts of these three materials should be stored at -80°C. Store all other components store at 4°C.

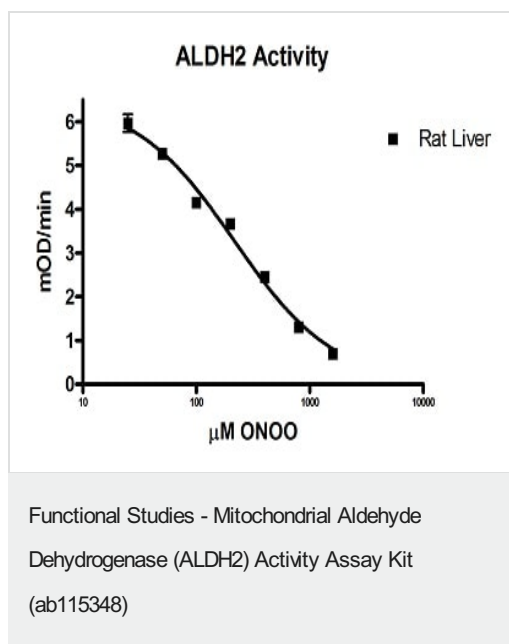
平台 Microplate reader

性能

存放说明 Store at +4°C. Please refer to protocols.

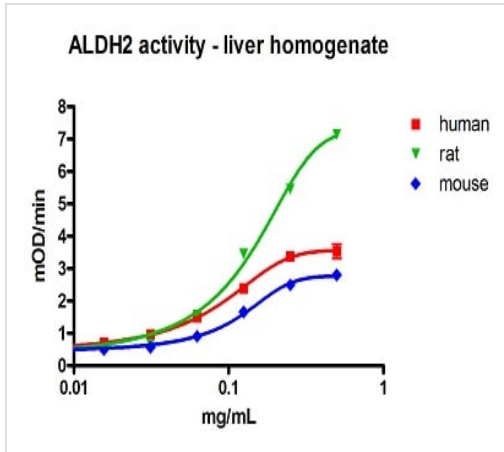
组件	1 x 96 tests
100X acetaldehyde (2.5 M)	1 x 0.25ml
100X Coupler	1 x 0.25ml
100X NAD+	1 x 0.25ml
100X Reagent Dye	1 x 0.25ml
10X Blocking Buffer	1 x 6ml
1X Base Buffer	1 x 24ml
20X Buffer	1 x 20ml
96 well microplate (12 strips)	1 unit
Extraction Buffer (ab260490)	1 x 15ml

图片



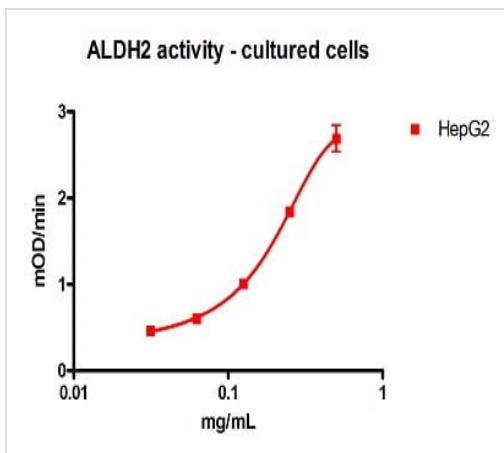
Determination of effect reactive species on ALDH2 activity.

The mitochondrial location of ALDH2 may increase the exposure of this enzyme to high levels of reactive oxygen and nitrogen species generated in mitochondria. ALDH2 has been shown to be specifically inactivated by nitrate stress, particularly by modification or crosslinking of an active site cysteine. To demonstrate this rat liver homogenate was exposed in vitro to a dilution series of peroxyntirite at concentrations - 0, 25, 50, 100, 200, 400, 800, 1600 μM. After exposure the samples were extracted, diluted to 0.25 mg/mL and loaded into microplate wells in duplicate. After following the assay protocol as described above, the activity of each sample was measured and graphed against peroxyntirite exposure concentration. The ALDH2 activity after exposure was reduced with an IC₅₀ approximately 210 μM.



Reference Sample graph

Functional Studies - Mitochondrial Aldehyde Dehydrogenase (ALDH2) Activity Assay Kit (ab115348)



Reference sample graph

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