

For Research Use Only. Not For Use In Diagnostic Procedures

Version 2.0

L-乳酸检测试剂盒

L-lactate Assay Kit

Do not eat Store at -20° C & in the dark.



Cat.No.MKL5825

Size : 100 tests

Technical literature is available at www.mesgenbio.com

E-mail MesGen Technical Services if you have questions on use of this system: tech@mesgenbio.com

Description

L-Lactate is generated by lactate dehydrogenase (LDH) under hypoxic or anaerobic conditions. Monitoring lactate levels is, therefore, a good indicator of the balance between tissue oxygen demand and utilization and is useful when studying cellular and animal physiology. Simple, direct and automation-ready procedures for measuring lactate concentration are very desirable. MesGen Biotechnology L-lactate assay kit is based on lactate dehydrogenase catalyzed oxidation of lactate, in which reduces a probe into a colored product. The color intensity at 570nm or fluorescence intensity at 530nm/585nm is directly proportional to the galactose concentration in the sample.

Application

Direct Assays: L-lactate in serum, plasma, urine, cell media samples and other biological samples.

Key features

Sensitive and accurate. Detection limit of 2 μM and linearity up to 500 μM L-lactate in 96-well plate assay.

Convenient. The procedure involves adding a single working reagent, and reading the colorimetric or fluorescence after 5-10 min. Room temperature assay.

High-throughput. Can be automated as a high-throughput 96-well plate assay for thousands of samples per day.

Kit contents

Reagent A : 5 mL **Reagent B :** 5 mL **Reagent C :** 200 μL

Standard: 1 mL 20mM **L-Lactic acid, lithium salt**

Precautions

Reagents are for research use only. Normal precautions for laboratory reagents should be exercised while using the reagents. Please refer to Material Safety Data Sheet for detailed information.

Procedures

- Standard Curve.** Prepare 1000 μL 500 μM L-lactate Premix by mixing 25 μL 20 mM Standard and 975 μL distilled water. For cell culture samples, prepare 1000 μL 40 μM L-lactate Premix by mixing 25 μL 20 mM Standard and 975 μL culture medium without serum. Dilute standard as follows.

No.	Premix + H ₂ O or Medium	L-lactate (μM)
1	50 μL + 0 μL	500
2	20 μL + 30 μL	200
3	10 μL + 40 μL	100
4	5 μL + 45 μL	50
5	1 μL + 49 μL	10
6	0.2 μL + 49.8 μL	2
7	0 μL + 50 μL	0

Transfer 10 μL standards into wells of a black 96-well plate.

Samples. Add 10 μL of each sample to separate wells of a black 96-well plate.

- Reagent Preparation.** Spin the Enzyme tubes briefly before pipetting. For each Sample and Standard well, prepare Working Reagent by mixing 50 μL Reagent A, 50 μL Reagent B, 2 μL Reagent C. Fresh reconstitution is recommended.
- Reaction.** Add 100 μL Working Reagent per reaction well quickly. Tap plate to mix. Incubate for 5-10 min at RT protected from light.
- Read the color intensity at 570nm or fluorescence lex/em = 530/585 nm.**

Calculation

Plot the L-lactate Standard Curve and determine its slope. The L-lactate.

Sample preparation and consideration

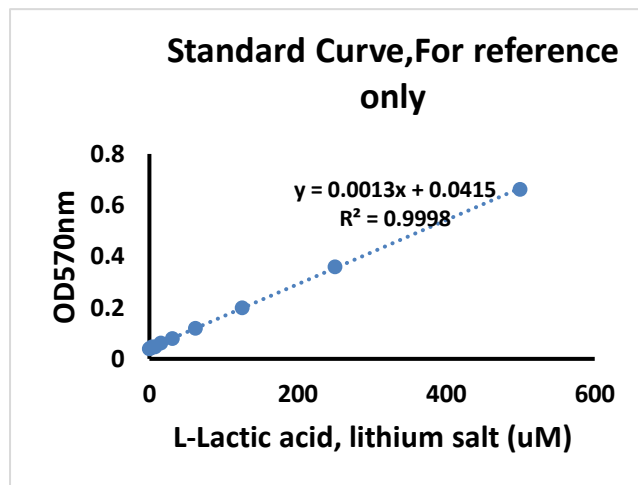
Glycerol and SH-containing reagents (e.g. b-mercaptoethanol, dithiothreitol) are known to interfere in this assay and should be avoided in sample preparation.

Storage conditions

The kit is shipped on ice. Store all reagents at -20°C.

Shelf life

6 months after receipt.



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