abcam

Product datasheet

L-Lactate Assay Kit (Colorimetric) ab65331

★★★★★ 2 Abreviews 272 References 画像数 5

製品の概要

製品名	L-Lactate Assay Kit (Colorimetric)
検出方法	Colorimetric
サンプルの種類	Cell culture supernatant, Urine, Serum, Plasma, Other biological fluids, Cell Lysate, Tissue Lysate
アッセイタイプ	Quantitative
検出感度	0.02 mM
検出範囲	0.02 mM - 10 mM
全工程の試験時間	0h 30m
製品の概要	L-Lactate Assay Kit (Colorimetric) (ab65331) uses an assay protocol where lactate is oxidized by lactate dehydrogenase to generate a product which interacts with a probe to produce a color (λmax = 450 nm). The kit detects L(+)-Lactate in biological samples such as serum or plasma, cells, tissues, cell culture and fermentation media. Lactate assay protocol summary: - add samples and standards to wells - add reaction mix and incubate for 30 min at room temp - analyze with microplate reader
特記事項	This product is manufactured by BioVision, an Abcam company and was previously called K627 Lactate Colorimetric Assay Kit II. K627-100 is the same size as the 100 test size of ab65331. L(+)-Lactate is the major stereo-isomer of lactate formed in human intermediary metabolism and is present in blood. D(-)-Lactate is also present (see **D-Lactate assay kits**) but only at about 1-5% of the concentration of L(+)-Lactate. L-Lactate assay kit ab65331 is our most popular L-Lactate assay kit (colorimetric 450nm, range 0.02 mM - 10 mM). Alternative L-Lactate assay kits offer different readout modes/wavelengths and sensitivity/range: - **L-Lactate assay ab65330**: colorimetric 570 nm, fluorometric Ex/Em 535/587 nm, range 0.001 mM - 10 mM - **L-Lactate assay ab169557**: fluorometric Ex/Em 535/587 nm, range 0.2 µM - 50 µM Review our **Metabolism Assay Guide** to learn about assays for metabolites, metabolic enzymes, mitochondrial function, and oxidative stress, and also about how to assay metabolic function in

live cells using your plate reader.

How other researchers have used L-Lactate Assay Kit ab65331

This Lactate assay kit has been used in publications in a variety of sample types, including:
- Human: THP-1 cell lysates[1], MDA-MB-231 and HepG2 cell culture lysates[2], cell culture supernatant (HepG2, A549, Huh7, PC3, LN229, HeLa)[3], brain tissue[4]
- Mouse: brown adipose tissue lysate[5], thymic lymphoma tissue[6], cell culture supernatant[7], T cell primary cell culture supernatants[8], serum[9], serum and muscle[10]
- Bovine: cumulus cell culture supernatant[11]

References: 1 - Tran UT and Kitami T 2019; 2 - Cui J et al 2019; 3 - Rodriguez ML et al 2018, Chen Y et al 2018, Zhang D et al 2018, Caino MC et al 2017, Birkenmeier K et al 2015; 4 - Sullivan RC et al 2019; 5 - Jeong JH et al 2018; 6 - Vara-Ciruelos D et al 2019; 7 - Fiorenzano et al 2016; 8 - Menk AV et al 2018; 9 - Deng W et al 2019, Guglielmetti C et al 2017, Kang R et al 2016; 10 - Kim HY et al 2016; 11 - Sinha et al 2017

試験プラットフォーム Microplate reader

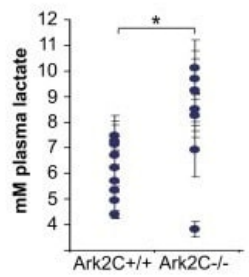
製品の特性

保存方法 Store at -20°C. Please refer to protocols.

内容	100 tests
L(+)-Lactate Standard	1 x 100µl
Assay Buffer XII	1 x 25ml
Enzyme Mix XV	1 vial
Developer Solution III	1 vial

関連性 Lactate ($CH_3CH(OH)COO^-$) plays important roles in many biological processes. Abnormal high concentration of lactate has been related to disease states such as diabetes and lactate acidosis, etc. L(+)-Lactate is the major stereoisomer of lactate formed in human intermediary metabolism and is present in blood. The lactate to pyruvate ratio reflects the redox state of the cell and describes the balance beween NAD^+ and NADH, which is dependent on the interconversion of lactate and pyruvate via lactate dehydrogenase (LDH).

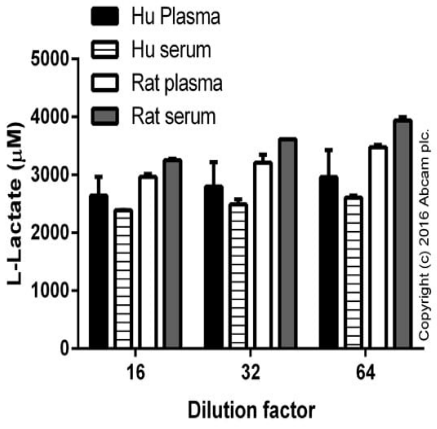
画像



Kelly CE et al., PLoS Biol 11:e1001538 (2013).

L-Lactate Assay Kit (Colorimetric) ab65331

Plasma lactate concentrations were determined using L-Lactate assay kit (ab65331) in Ark2C$^{+/+}$ and Ark2C$^{-/-}$ (Arkadia-like gene) mice.



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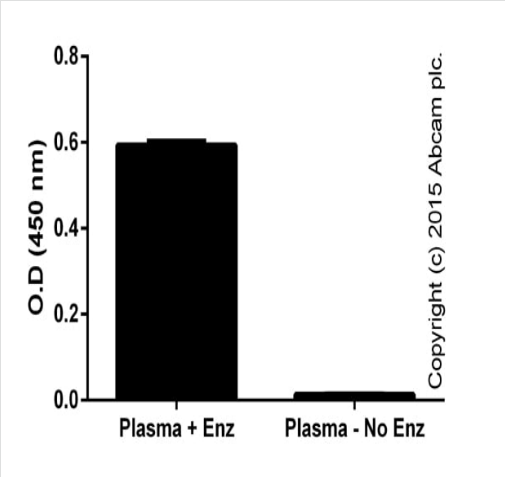
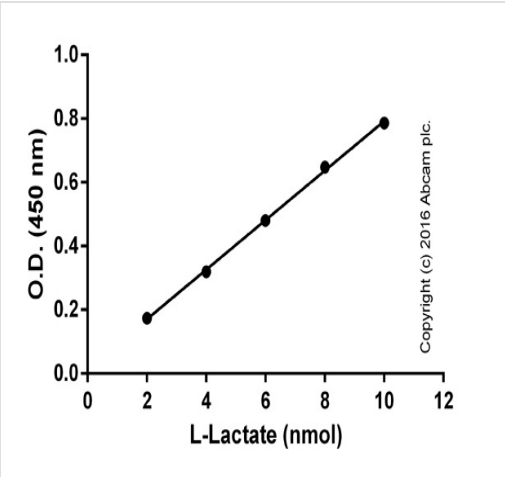
Linearity of dilution: concentration of L-Lactate in differently diluted (X-axis) biological samples, demonstrating a linearity of 89%-111% (concentrations corrected for by factor of dilution; duplicates; +/- SD).



L-Lactate Assay Kit (Colorimetric) (ab65331)

Relative signal (RFU) in unfiltered human plasma (dilution 1:8), comparing L-lactate signals with background reading (no enzyme) after 10 minutes of incubation (duplicates +/- SD).



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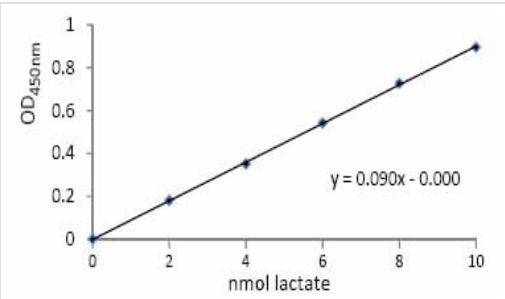
Standard curve with background signal subtracted (duplicates; +/- SD).



L-Lactate Assay Kit (Colorimetric) (ab65331)

Lactate Standard Curve. The assay is performed following the kit (ab65331) protocol.

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