

Product datasheet

LDH Assay Kit / Lactate Dehydrogenase Assay Kit (Colorimetric) ab102526

★★★★★ [1 Abreviews](#) [110 References](#) [4 Images](#)

Overview

Product name	LDH Assay Kit / Lactate Dehydrogenase Assay Kit (Colorimetric)
Detection method	Colorimetric
Sample type	Cell culture supernatant, Urine, Serum, Plasma, Other biological fluids, Tissue Extracts
Assay type	Enzyme activity (quantitative)
Sensitivity	> 1 mU/ml
Range	1 mU/ml - 100 mU/ml
Assay time	0h 30m
Product overview	Lactate Dehydrogenase (LDH) Assay Kit (Colorimetric) ab102526 quantifies LDH activity in a variety of samples such as serum or plasma, tissue, cells, and culture medium.

In the LDH assay protocol, LDH reduces NAD to NADH, which then interacts with a specific probe to produce a color (OD max = 450 nm). The kit can detect 1 - 100 mU/mL of LDH directly in samples. The assay is quick, convenient, and sensitive.

LDH assay protocol summary:

- add samples and standards to wells
- add reaction mix
- analyze every 2-3 min for at least 30 min with microplate reader in kinetic mode at 37°C

Notes This product is manufactured by BioVision, an Abcam company and was previously called K726 Lactate Dehydrogenase Activity Colorimetric Assay Kit. K726-500 is the same size as the 500 test size of ab102526.

To measure LDH release into cell culture medium from cultured cells in a cytotoxicity experiment, we recommend [LDH assay kit ab65393](#), which is designed specifically as a cytotoxicity assay.

This LDH assay kit ab102526 is designed in a more flexible format for use with a variety of sample types (this includes cell culture medium, and this kit may be used in cytotoxicity assays). This flexible format LDH assay kit is also available as a [fluorometric LDH assay kit ab197000](#).

How other researchers have used LDH Assay Kit ab102526

This LDH assay kit has been used in publications in a variety of sample types, including:
- Human: serum¹

- Mouse: kidney tissue², kidney epithelial cell line lysates³, muscle tissue⁴, serum^{2,5}, vaginal lavage fluid⁶, liver tissue⁷

- Rat: H8C2 cell lysates⁸

It has also been used in LDH release cytotoxicity cell culture assays including in human hippocampal neuronal cultures⁹, THP-1 cells¹⁰, primary chondrocyte cells on a membrane scaffold¹¹, primary lymphocytes¹², ovarian cancer cells co-cultured with mouse splenocytes in a cytotoxic T lymphocyte assay¹³

References: 1-Zhang Z et al 2018, Solivio MJ et al 2016; 2-Niles DJ et al 2018; 3-Tanner LB et al 2018; 4-Tam BT et al 2018; 5-Kim HY et al 2016; 6-Nash EE et al 2016; 7-Lai C et al 2018; 8-Zhou Z et al 2018; 9-Wang Q et al 2019; 10-Alimov I et al 2019; 11-Stocco TD et al 2019; 12-Dreisig K et al 2018; 13-Sun Y et al 2018

Platform Microplate reader

Properties

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

Components	Identifier	500 tests
LDH Assay Buffer	NM	1 x 50ml
LDH Positive Control (lyophilized)	Red	1 vial
LDH Substrate Mix (lyophilized)	Amber	1 vial
NADH Standard (lyophilized)	Yellow	1 vial

Pathway Fermentation; pyruvate fermentation to lactate; (S)-lactate from pyruvate: step 1/1.

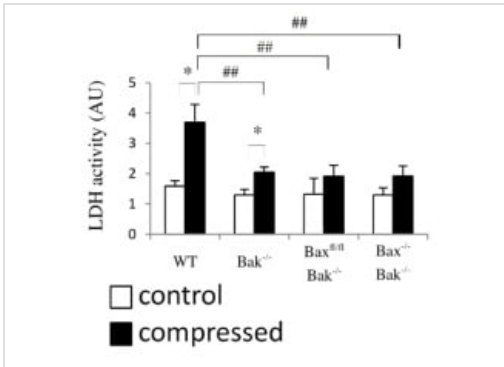
Involvement in disease Defects in LDHA are the cause of glycogen storage disease type 11 (GSD11) [MIM:612933]. A metabolic disorder that results in exertional myoglobinuria, pain, cramps and easy fatigue.

Sequence similarities Belongs to the LDH/MDH superfamily. LDH family.

Post-translational modifications ISGylated.

Cellular localization Cytoplasm.

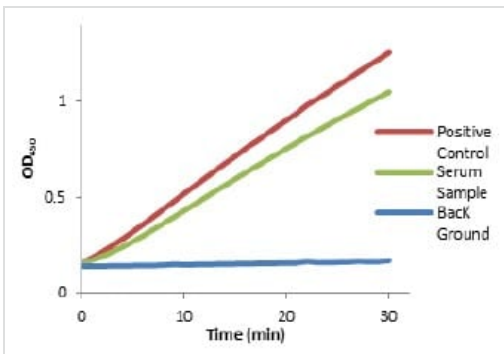
Images



LDH assay on mouse skeletal muscle

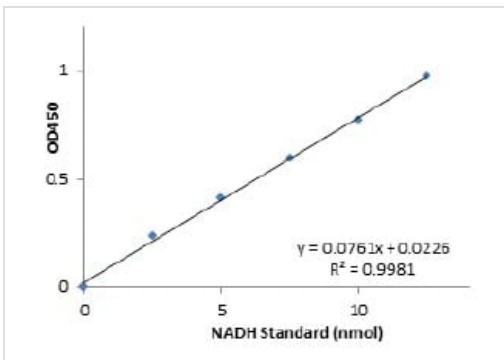
Tam BT et al. 2018 Sci Rep 8:3689 Use licensed under: <http://creativecommons.org/licenses/by/4.0/>

Tam BT *et al.* used the LDH assay kit on mouse skeletal muscle tissue lysates comparing pressure-induced compressed and control samples across a range of knockout mice lines.



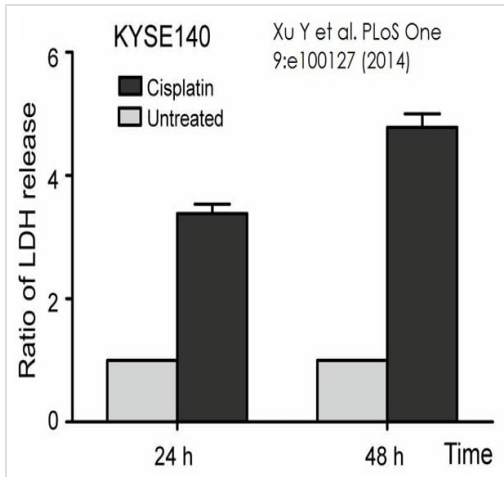
Functional Studies - Lactate Dehydrogenase
Colorimetric Assay Kit (ab102526)

Kinetic profiles of approx 0.5 mU of a sample of pure LDH (Positive Control) and 2 µL frozen human serum using buffer as a background control.



Functional Studies - Lactate Dehydrogenase
Colorimetric Assay Kit (ab102526)

NADH Standard Curve.



Cellular necrosis was measured as LDH release after cisplatin treatment for 24 h and 48 h using ab102526. The release of LDH was apparently increased at 24 and 48 h after cisplatin treatment.

Functional Studies - Lactate Dehydrogenase

Colorimetric Assay Kit (ab102526)

Image from Xu Y et al., PLoS One. 2014;9(6):e100127. Fig 2(B).; doi: 10.1371/journal.pone.0100127. Reproduced under the Creative Commons license <http://creativecommons.org/licenses/by/4.0/>

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