abcam

Product datasheet

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

1 Abreviews 195 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 37ºC
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 cytoxicity 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: serum[1]

- Mouse: kidney tissue[2], kidney epithelial cell line lysates[3], muscle tissue[4], serum[2,5], vaginal lavage fluid[6], liver tissue[7]
- Rat: H8C2 cell lysates[8]

It has also been used in LDH release cytotoxicity cell culture assays including in human hippocampal neuronal cultures[9], THP-1 cells[10], primary chondrocyte cells on a membrane scaffold[11], primary lymphocytes[12], ovarian cancer cells co-cultured with mouse splenocytes in a cytotoxic T lymphocyte assay[13]

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.

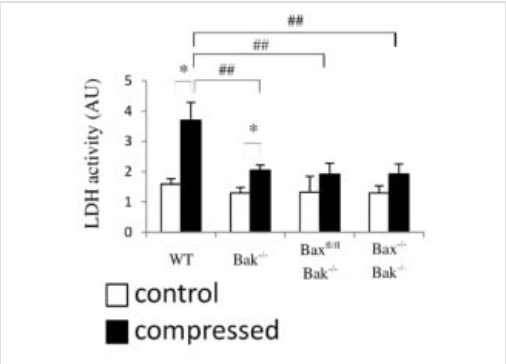
Involvement in disease Defects in LDHA are the cause of glycogen storage disease type 11 (GSD11) [MIM:612933]. A metabolic disorder that results in exertional myoglobinuria, pain, cramps and easy fatigue.

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

Post-translational modifications ISGylated.

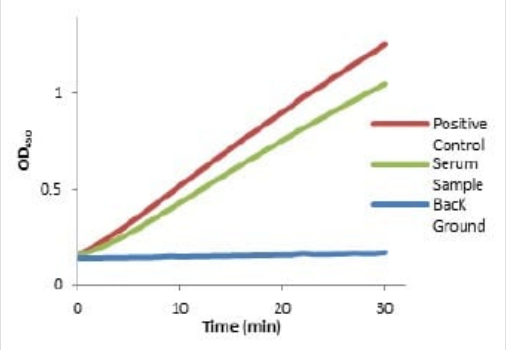
Cellular localization Cytoplasm.

Images



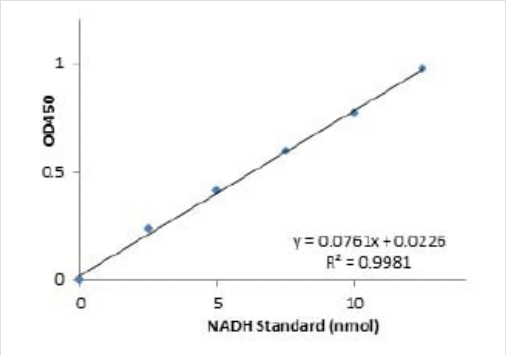
LDH assay on mouse skeletal muscle

Tam BT *et al.* 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.



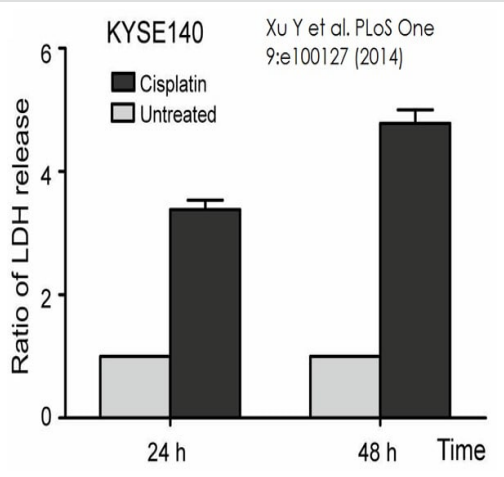
Functional Studies - Lactate Dehydrogenase Colorimetric Assay Kit (ab102526)

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.



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/

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.

Our Abpromise to you: Quality guaranteed and expert technical support

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit **https://www.abcam.com/abpromise** or contact our technical team.

Terms and conditions

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors