abcam

Product datasheet

LDH Assay Kit (Cytotoxicity) ab65393

45 References 3 Images

Overview

Product name	LDH Assay Kit (Cytotoxicity)
Detection method	Colorimetric
Sample type	Adherent cells, Suspension cells
Assay type	Enzyme activity (quantitative)
Assay time	1h 00m
Product overview	LDH Assay Kit (Cytotoxicity) ab65393 (previously called LDH-Cytotoxicity Assay Kit II) uses WST for a fast and more sensitive detection of LDH released from damaged cells. The LDH assay protocol uses an enzymatic coupling reaction: LDH oxidizes lactate to generate NADH, which then reacts with WST to generate a yellow color. The intensity of the generated color correlates directly with the cell number lysed. As WST is brighter than other cell viability reagents, less culture medium is required for the assay, and thus the background from serum and culture medium is significantly reduced. Cells can be cultured in regular 10% serum containing medium; no reducing serum or special medium is required for the assay. In addition, since WST is very stable, the reaction can be read multiple times and can be stopped at any time point during the reaction. LDH activity can be easily quantified by spectrophotometer or plate reader at OD450nm. LDH assay protocol summary: - transfer culture medium into new plate - add LDH reaction mix and incubate for 30 min at room temp - analyze with microplate reader
Notes	If you would like to use a fluorometric reading, please refer to LDH-Cytotoxicity Assay Kit (Fluorometric) (ab197004). This kit is more sensitive than the colorimetric LDH Cytoxicity Assay Kit ab65391. To measure LDH activity in sample types such as serum, plasma, and cell lysates, we recommend LDH assay kit ab102526. A cell death assay / cytotoxicity assay classically assesses the level of plasma membrane

damage to a cell population. Lactate dehydrogenase (LDH) is a stable enzyme, present in all cell types, which is rapidly released into the cell culture medium upon damage of the plasma membrane. LDH is the most widely used marker used to run a cytotoxicity assay.

Review our cell health assay guide to learn about our other kits to perform a cell viability assay, cytotoxicity assay or cell proliferation assay.

Platform Microplate reader

Properties

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

Components	Identifier	500 tests
Cell Lysis Solution	Clear, cap code is Amber	1 x 5ml
LDH (Positive control)	Red	1 vial
LDH Assay Buffer	NM	1 x 50ml
Stop Solution	Blue	1 x 5ml
WST Substrate Mix	Amber	1 vial

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

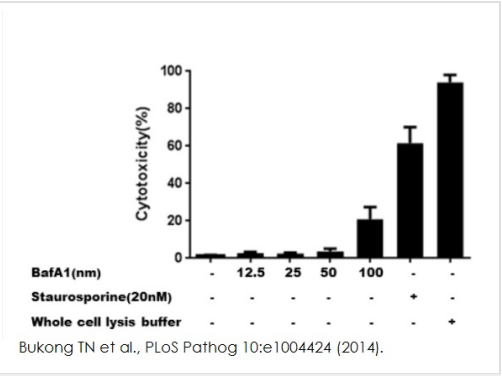
Involvement in disease Defects in LDHA are the cause of glycogen storage disease type 11 (GSD11) [MIM:612933]. A metabolic disorder that results in exertional myoglobinuria, pain, cramps and easy fatigue.

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

Post-translational modifications lSGylated.

Cellular localization Cytoplasm.

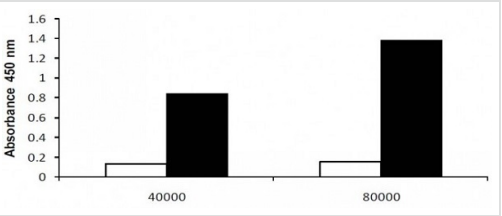
Images



LDH Cytotoxicity Assay using ab65393

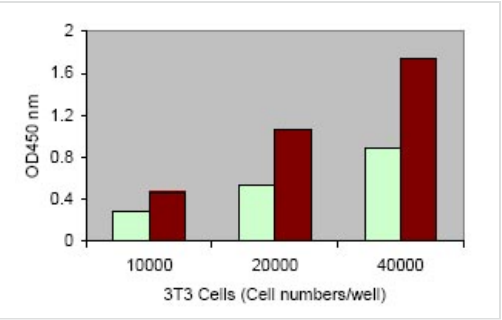
Image from Bukong TN et al., PLoS Pathog 10(10), Fig S6. Doi: 10.1371/journal.ppat.1004424. Reproduced under the Creative Commons license http://creativecommons.org/licenses/by/4.0/

Bafilomycin A1 (BafA1) toxicity was assessed in Human hepatic (Huh7.5) cells after 24 hours at different concentrations (12.5nm, 25nm, 50nm and 100nm) were administered to cells using LDH cytotoxicity assay kit (ab65393). Cytotoxicity was measured by subtracting LDH content in remaining viable cells from total LDH in untreated controls.



LDH Cytotoxicity Assay useing ab65393

Jurkat T cells were cultured in 96-well plate in 100 µl of culture medium. LDH Assay was performed using 10µl of culture medium using the WST probe. Low control (white bar); High control (black bar).



LDH Cytotoxicity Assay using ab65393

Comparison of WST-1 and INT based LDH assays. 3T3 cells were cultured in a 96-well plate in 100 µl of culture medium. The LDH assay was performed using 10 µl of culture medium using WST-1 (Brown bar) and INT (Green bar) methods. The WST-1 based LDH assay is more stable and sensitive than the INT based method.

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