abcam

Product datasheet

MTS Assay Kit (Cell Proliferation) (Colorimetric) ab197010

137 References 4 图像

概述

产品名称	MTS Assay试剂盒(Cell Proliferation) (Colorimetric)
检测方法	Colorimetric
样品类型	Adherent cells, Suspension cells
检测类型	Quantitative
检测时间	4h 00m
产品概述	MTS Assay Kit ab197010 uses a colorimetric method for the sensitive quantification of viable cells. It is based on a single ready-to-use reagent. The MTS assay is used to assess cell proliferation, cell viability and cytotoxicity. The MTS assay protocol is based on the reduction of the MTS tetrazolium compound by viable mammalian cells (and cells from other species) to generate a colored formazan dye that is soluble in cell culture media. This conversion is thought to be carried out by NAD(P)H-dependent dehydrogenase enzymes in metabolically active cells. The formazan dye is quantified by measuring the absorbance at 490-500 nm. NB: MTS is also available as free molecule as **ab223881** (Tetrazolium inner salt cell proliferation reagent). **MTS assay protocol summary:** - add MTS reagent to cell culture media - incubate for 0.5 - 4 hours in standard culture conditions - shake plate briefly and measure absorbance at 490 nm. The MTS assay is suitable for standard cell culture plates or 96-well and other microtitre well plates. MTS assays are often used for the measurement of cell proliferation in response to growth factors, cytokines, mitogens, and nutrients, etc. They are also used for the analysis of cytotoxic compounds like anticancer drugs and other toxic agents.
说明	This product is manufactured by BioVision, an Abcam company and was previously called K300 MTS Cell Proliferation Colorimetric Assay Kit. K300-2500 is the same size as the 2500 test size of ab197010. Review our **cell health assay guide** to learn about kits to perform a **cell viability assay**, **cytotoxicity assay** or **cell proliferation assay**.

How other researchers have used MTS Assay Kit ab197010

The MTS assay kit has been used in publications with a variety of cell lines and primary cells, including:
FB671 fibroblasts[1], HUVEC and 4T1 cells[2], IBRS-2 pig kidney cells[3], mouse mesangial kidney cells[4], human pancreatic ductal adenocarcinoma (PANC-1) and normal dermal fibroblast 3D co-cultures[5], human primary fibroblasts[6], human HuccT1 cholangiocarcinoma cells[7], human glioma cell line[8], human embryonic kidney cell line[9], human 97L liver cancer cell line[10], canine and human PBMCs[11]

References: 1-Seminotti B et al 2019, 2-Amirshaghaghi A et al 2019, 3-Li SF et al 2019, 4-Widowati W et al 2018, 5-Betriu N and Semino CE 2018, 6-Leipnitz G et al 2018, 7-Lin HY et al 2018, 8-Nadaradjane A et al 2018, 9-Broguiere et al 2018, 10-Zhang K et al 2018, 11-Gardin C et al 2018

平台 Microplate reader

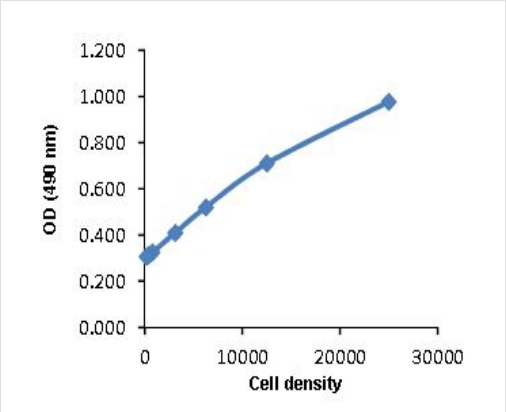
性能

存放说明 Store at -20°C. Please refer to protocols.

组件	500 tests	2500 tests	250 tests	5000 tests	10000 tests
MTS Reagent	1 x 10ml	1 x 50ml	1 x 5ml	1 x 100ml	1 x 200ml

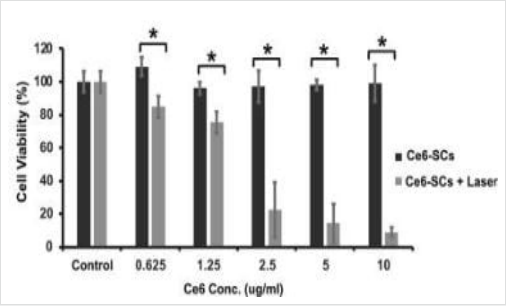
相关性 Cell proliferation is the multiplication or reproduction of cells, as a result of cell growth and cell division, resulting in the expansion of a cell population.

图片



Absorbance at OD=490 nm is proportional to cell density

Jurkat cells were cultured at different densities overnight at 37°C in a final volume of 200 µL/well. MTS reagent was added and absorbance at OD=490 nm was recorded using ELISA plate reader. Each point represents a mean of 3 replicates. Assay was performed according to the kit protocol.

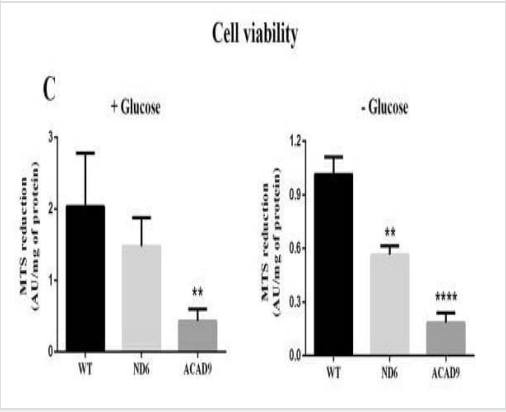


Viability of 4T1 cells using MTS assay

Amirshaghaghi A et al. Sci Rep. 2019; 9: 2613. doi: 10.1038/s41598-019-39036-1. Reproduced under the creative commons license http://creativecommons.org/licenses/by/4.0/.

Amirshaghaghi A et al. used MTS assay kit ab197010 in their study of a new preparation of the Chlorin e6 photosensitizer (Ce6). Ce6 is used in photodynamic tumor therapy: photosensitizers localized to tumor cells produce cytotoxic reactive oxygen species on exposure to specific wavelengths of light.

They used the MTS assay kit to measure the viability of 4T1 cells treated with different concentrations of their Ce6 preparation, with and without laser irradiation (665 nm, 5 J/cm^2).

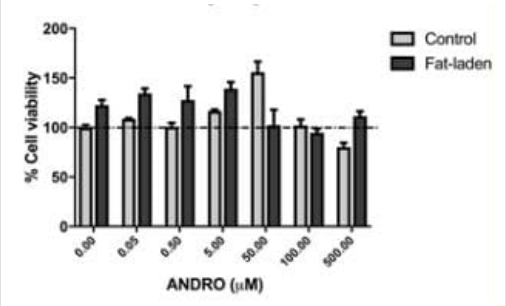


Fibroblast Cell Viability MTS Assay

Leipnitz G et al. Sci Rep. 2018; 8: 1165. doi: 10.1038/s41598-018-19543-3 Reproduced under the creative commons license http://creativecommons.org/licenses/by/4.0/.

Leipnitz G et al. used MTS assay kit ab197010 in their study of mitochondrial complex I deficiency.

They used the MTS assay to examine the reduction in the cell viability of ND6 deficient and ACAD9 deficient fibroblasts, compared to wild type, when cultured in the absence and presence of glucose.



Hepatocyte Cell Viability studied with MTS assay

Cabrera D et al. Sci Rep. 2017; 7: 3491. doi: 10.1038/s41598-017-03675-z Reproduced under the creative commons license http://creativecommons.org/licenses/by/4.0/.

Cabrera et al. used MTS assay kit ab197010 as part of studying ANDRO (Andrographolide), an anti-inflammatory compound with potential for use in the treatment of nonalcoholic steatohepatitis.

They used the MTS assay to demonstrate that ANDRO did not affect cell viability at the concentrations used in their study.

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