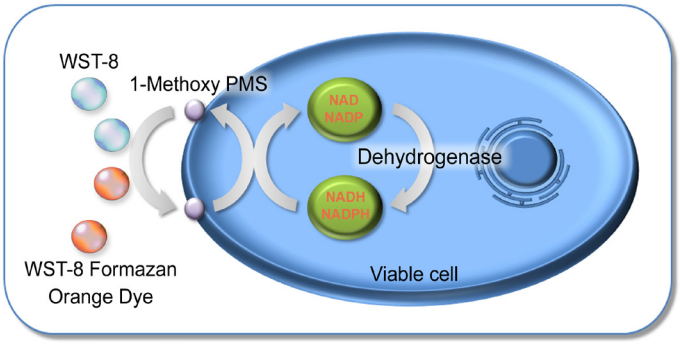
Cell Proliferation & Cytotoxicity

~ Comparison with BrdU, ^{3}H Tymidine Assay ~

Cell Counting Kit-8 (CCK-8)
WST Method

General Information

Cell Counting Kit-8 (CCK-8) allows sensitive colorimetric assays for the determination of cell viability in cell proliferation and cytotoxicity assays. Dojindo's highly water-soluble tetrazolium salt, WST-8*, is reduced by dehydrogenase activities in cells to give a yellow-color formazan dye, which is soluble in the tissue culture media. The amount of the formazan dye, generated by the activities of dehydrogenases in cells, is directly proportional to the number of living cells. The detection sensitivity of CCK-8 is higher than the other tetrazolium salts such as MTT, XTT, MTS or WST-1.
*Patent No. US6,063,587 & CA2,251,850



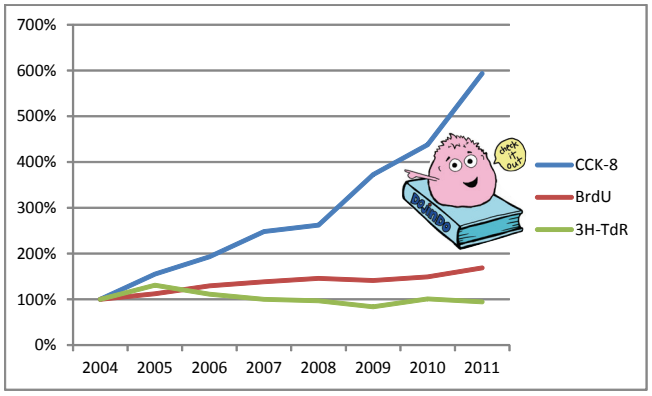
Most simple procedure!!!

THE HANDLING time of Cell Counting Kit-8 is shortest among it's competitors. Only 15 minutes of handling time for Cell Counting Kit-8 where as 55 minutes or longer handling time is require for both BrdU and ^{3}H-Thymidine assay. Not only less handling time is require for Dojindo's Cell Counting Kit-8, but CCK-8 allows more accurate result of the test result.

Reagent	Procedure						Handling Time
CCK-8			Add Reagent 10 minutes			Measurement 5 minutes	15 minutes
BrdU	Labeling BrdU 10 minutes	Fix Cells 45 minutes	Add BrdU-POD 10 minutes	Wash Cells 10 minutes	Add Substrate 10 minutes	Measurement 5 minutes	90 minutes
^{3}H-TdR	Label ^{3}H-TdR 10 minutes	Wash Cells 10 minutes	TCA Preparation 20 minutes	Homoginize Cells 20 minutes		Measurement 10 minutes	70 minutes

Our consumer rate is increasing

According to online journal search engines such as highwire.org and pubmed.com, the number of published journals for Dojindo's "Cell Counting Kit-8" has increased over the past few years. In 2005, Cell Counting Kit-8 beat both BrdU and ^{3}H-Thymidine cell proliferation methods. In 2009, Cell Counting Kit-8 surpassed both methods by more than 100%.



References using CCK-8

Immunotoxin Research

A recombinant immunotoxin engineering for increased stability by adding a disulfide bond has decreased immunogenicity
Wenhai Liu, et al., Protein Engineering Design and Selection, 25(1), 1 (2012)

Stem Cell Research

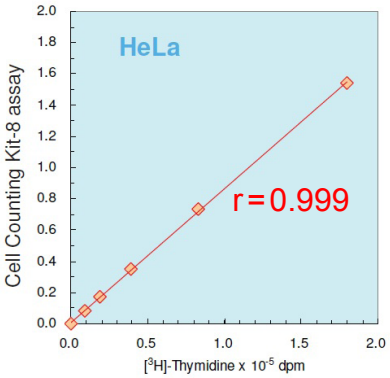
Oligo-guanosine nucleotide induces neuropilin-1 internalization in endothelial cells and inhibits angiogenesis
Masashi Narazaki, et al., Blood, 116(16), 3099 (2010)

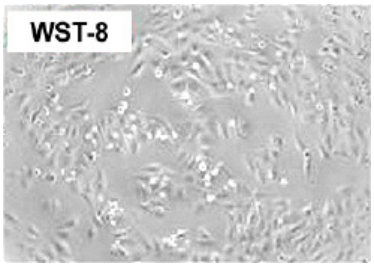
Signal Transduction Research

7-Ketocholesterol-Induced Inflammation: involvement of Multiple Kinase Signaling Pathways via NFkB but Independently of Reactive Oxygen Species Formation
Ignacio M. Larrayoz, et al., Invest. Ophthalmol. Vis. Sci., 51(10), 4942 (2010)

Great Correlation Data

CCK-8 gives the great correlation result with ^{3}H-Thymidine Assay.



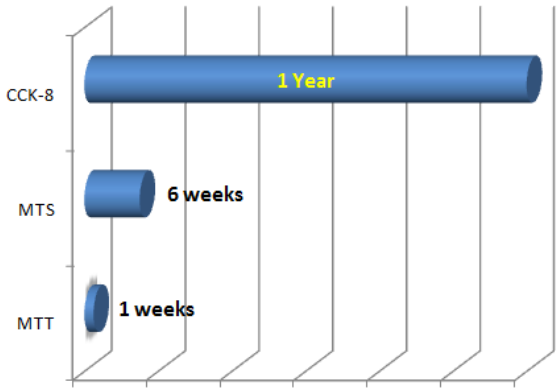


No Toxic Cells

Only in CCK-8, continuous culture is possible without killing cells. Observation of HeLa cells with WST-8(CCK-8) for 24 hours from addition of CCK-8 reagent.

Longer stability

With stability up to a year at -20°C, you don't have to worry about preparing your cell proliferation reagent right before your experiment. Cell Counting Kit-8 is even stable for 6 months at the room temperature. There is no one out there who can survive the heat like us.

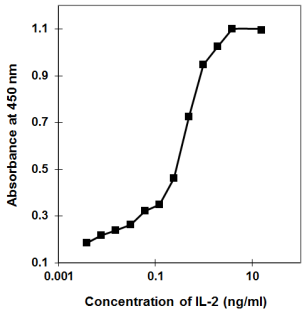


Assay Data

Proliferation

Response by Cytokine

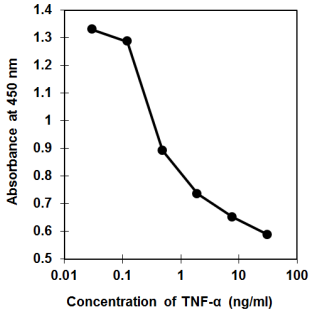
Cell : CTLL-2 Cells
Medium: RPMI1640 with FBS
Drug : Human Interleukin-2
Exposure : 37°C, 5% CO_2, 72 hr



Cytotoxicity

Anti Cancer Drug Activity

Cell : HeLa Cells
Medium: DMEM with FBS
Drug : TNF-α with 1 mg/ml Actinomycin D
Exposure : 37°C, 5% CO_2, 5 hr



Product Code	Product Name	Unit	Price (USD)
CK04-11	Cell Counting Kit-8	1,000 tests	170.00
CK04-13		3,000 tests	360.00
CK04-20		10,000 tests	950.00

*One test corresponds to one well on a 96-well plate. 500 tests (5 mL) per bottle for 1,000 and 3,000 tests. 10,000 tests (100 mL) per bottle for CK04-20.

Research Use Only

Prices listed are for U.S. customers only and may vary in other countries.
Prices are subject to change without notice.

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