



SuperKine™ Maximum Sensitivity Cell Counting Kit-8 (CCK-8)

Cat #: BMU106-EN

Size: 200 T/1000 T/10000 T

	Maximum Sensitivity Cell Counting Kit-8 (CCK-8)		
REF	Cat #: BMU106-EN	LOT	Lot #: Refer to product label
	Storage: Storage at 4°C for 12 months, protected from light. Storage at -20°C for at least 24 months.		

Assay Principle

SuperKine™ Maximum Sensitivity Cell Counting Kit-8 (CCK-8) allows very convenient assays by utilizing highly water-soluble tetrazolium salt-WST-8. WST-8 is reduced by dehydrogenases in cells to give an orange colored product (formazan), which is soluble in the tissue culture medium. CCK-8, being nonradioactive, allows sensitive colorimetric assays for the determination of the number of viable cells in cell proliferation and cytotoxicity assays. The amount of the formazan in cells is directly proportional to the number of living cells, which can be used to detect cell proliferation and cell toxicity. The detection sensitivity using CCK-8 is higher than assays using other tetrazolium salts such as MTT, XTT, MTS or WST-1.

Materials Supplied and Storage Conditions

Kit components	Size			Storage conditions
	200 T	1000 T	10000 T	
Ready-to-use CCK-8 solution	2 mL	10 mL	100 mL	Storage at 4°C for 12 months, protected from light. Storage at -20°C for a more long time. Avoid repeated freezing and thawing. If you use it frequently, store it at 4°C.

Materials Required but Not Supplied

- Microplate Reader capable of measuring absorbance at OD450 nm, Humidifying carbon dioxide incubator
- 96 well cell culture plate with clear flat bottom, Precision pipettes, disposable pipette tips

Reagent Preparation

Ready-to-use CCK-8 solution: Ready-to-use, no premixing of components required.

Assay Procedure

I Drawing of standard curve

1. Count the number of cells in the prepared cell suspension with a cytometer, and then inoculate the cells;
2. Dilute the cell with the medium to form a cell concentration gradient in sequence, usually 5-7 cell concentration gradients, 4-6 multiple wells per concentration gradient;
3. After inoculation, incubate for 2-4 h to let the cells adhere to the plate (for adherent cells), or directly perform subsequent experimental operation (for suspension cells), add 10 µL CCK-8 reagent per 100 µL medium to incubate for a certain period of

time and then measure the OD450 value. With the number of cells as the x-axis and the OD450 value as the y-axis, draw the standard curve. According to this standard curve, the number of cells in unknown samples can be determined. The prerequisite for using this standard curve is that the test conditions are exactly the same.

II Cell Activity Assay Protocol

1. Inoculate cell suspension (100 μ L/well) in a 96-well plate. Pre-incubate the plate in a humidifying carbon dioxide incubator.
2. Add 10 μ L CCK-8 solution to each well of the plate. Be careful not to introduce bubbles to the wells, since they interfere with the OD reading.
3. Incubate the plate for 1-4 h in the incubator. The incubation time depends on the experimental conditions such as cell type and cell density;
4. Measure the absorbance at 450 nm using a microplate reader.

III Cell Proliferation and Cytotoxicity Assay Protocol

1. Dispense 100 μ L of cell suspension (5000 cells/well) in a 96-well plate. Pre-incubate the plate for 24 h in a humidifying carbon dioxide incubator.
2. Add 1-10 μ L of various concentration of substances to be tested to the plate.
3. Incubate the plate for an appropriate length of time (e.g., 6, 12, 24 or 48 h) in the incubator.
4. Add 10 μ L of CCK-8 solution to each well of the plate. Be careful not to introduce bubbles to the wells, since they interfere with the OD reading.
5. Incubate the plate for 1-4 h in the incubator. The incubation time depends on the experimental conditions such as cell type and cell density;
6. Measure the absorbance at 450 nm using a microplate reader.

Strawberry moment: In addition to the SuperKine™ Maximum Sensitivity Cell Counting Kit-8 (CCK-8) (Cat #: BMU106-EN), which provides high-throughput detection of cell proliferation levels, the cell proliferation levels also can be performed in a variety of ways: Immunostaining is used to observe active proliferative molecular markers Ki-67 (Cat #: ABM40064) & PCNA (Cat #: A01040), and EdU assay kit (Cat #: KTA2030, KTA2031) based on the innovation of BrdU method. Scan the QR code on the right and follow the Abbkine official account to learn more about Abbkine products.



Precaution

1. The cells after CCK-8 detection can be used for other cell assays because of the low toxicity of CCK-8.
2. If the OD value is too low, please increase the number of cells appropriately or extend the incubation time after adding CCK-8.
3. The kit relies on the reaction catalyzed by dehydrogenase and conditions or chemicals that affect dehydrogenase activity in living cells will interfere with the detection. If the color or pH of the medium is changed due to long-term cultivation, please change the medium when adding CCK-8.

Recommended Products

Catalog No.	Product Name
KTA2031	Cell Proliferation EdU Image Kit (Orange Fluorescence)
KTA2030	Cell Proliferation EdU Image Kit (Green Fluorescence)

Disclaimer

The reagent is only used in the field of scientific research, not suitable for clinical diagnosis or other purposes.