



Cell Counting Kit-8 (CCK-8)

NB-64-00005-1mL

NB-64-00005-5mL

NB-64-00005-10mL

NB-64-00005-30mL

NB-64-00005-100mL

Cell Counting Kit-8 (CCK-8)

#Cat: NB-64-00005-1mL	Size: 1mL
#Cat: NB-64-00005-5mL	Size: 5mL
#Cat: NB-64-00005-10mL	Size: 10mL
#Cat: NB-64-00005-30mL	Size: 30mL
#Cat: NB-64-00005-100mL	Size: 100mL

Description:

Cell Counting Kit-8 (CCK-8) allows very convenient assays by utilizing the highly water-soluble tetrazolium salt WST-8 [2-(2-methoxy-4-nitrophenyl)-3-(4-nitrophenyl)-5-(2, 4-disulfophenyl)-2H-tetrazolium, monosodium salt] produces a water-soluble formazan dye upon reduction in the presence of an electron carrier. Cell Counting Kit-8 is a one-bottle solution; no premixing of components is required. Cell Counting Kit-8, being nonradioactive, allows sensitive colorimetric assays for the determination of the number of viable cells in cell proliferation and cytotoxicity assays.

Advantages:

- More Sensitive than MTT, MTS, or WST-1
- No Toxicity to Cell
- Simple Steps: No organic solvents required
- Stable and ready to use

Assay Mechanism:

WST-8 is reduced by dehydrogenases in cells to give a yellowcolored product (formazan), which is soluble in the tissue culture medium. The amount of the formazan dye generated by the activity of dehydrogenases in cells is directly proportional to the number of living cells. The detection sensitivity of CCK-8 is higher than other tetrazolium salts such as MTT, XTT, MTS or WST-1.

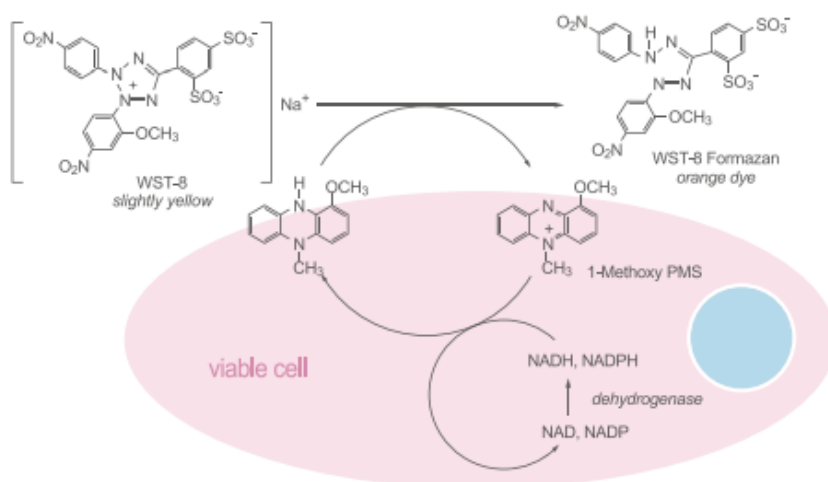


Figure 1 : Working mechanisms of Cell Counting Kit-8(CCK-8).

Properties	MTT	XTT	WST-1	CCK8
Solubility of Formazan	-	+	+	+
Forms	Power	2-bottle solution	1-bottle solution	1-bottle solution
Preparation	Dissolve before use	Mix before use	Ready to use	Ready to use
Sensitivity	+	++	++	+++
Detection Speed	+	++	++	+++
Wavelength	560~600nm	420~480nm	420~480nm	430~490nm
Toxicity	+	-	-	-
Stability	+	-	+	++
96-well plate compatability	+	++	++	++
Convenience	+	++	++	+++

Applications :

- Cell proliferation determinations
- Cytokine assays
- Cell viability assays
- Cytotoxicity assays

Note :

1. Cell Counting Kit-8 (CCK-8) is ready-to-use solution. Mix the reagent to ensure a homogeneous solution before use.
2. Pay attention to the edge effect of 96-well plate. It is suggested to discard the surrounding plate hole and add the same amount of PBS.
3. This product is for R&D use only, not for medical, household, or other uses.

Experiment Procedure:

1. 100uL cell suspension was inoculated on 96-well plate and incubated in cell incubator (37 °C, 5% CO₂).
2. Take the cells out of the incubator, add 1/10 volume of Cell Counting Kit-8 (CCK-8) directly to cells in culture medium. Mix thoroughly to achieve a homogeneous solution by lightly tapping the outside of the plate several times while avoiding bubbles. For 96-well plate, add 10 ul Cell Counting Kit-8 (CCK-8) per 100 ul medium.
3. Incubate in a cell culture incubator for 1 to 4 hours at 37 °C until the color turns orange. Over incubation will give false results.
4. Place the 96-well plate on the shaking table for about 1min before the reading of the microplate reader to ensure the uniform color of orifice plate.
5. The 450 nm light absorption value was read by an enzyme marker and cell activity was calculated.
6. Optional: Add 10 ul of 1%SDS (dissolve 0.1 g SDS with PBS buffer to prepare 10 ml solution) directly to 100 ul of cells to stop the reaction. Signals can be read within 3 days without affecting the absorbance values.

Storage

The Cell Counting Kit-8 (CCK-8) is stable for 1 years at 4°C with protection from light. For long term storage, store at -20 °C and below.