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DATASHEET

Cell Counting Kit-8 (CCK-8)

Product overview

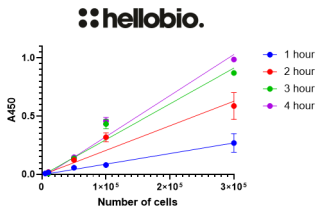
Name	Cell Counting Kit-8 (CCK-8)
Cat No	HB9337
Biological description	Cell Counting Kit-8 (CCK-8) is a ready to use solution for cell viability assays and cell proliferation assays. The kit uses WST-8 tetrazolium salt which is reduced by dehydrogenases in living cells to give a brightly coloured dye. The dye generated is directly proportional to the number of live cells enabling colorimetric quantitation of viable cell number.

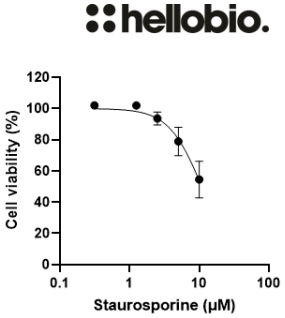
Key features:

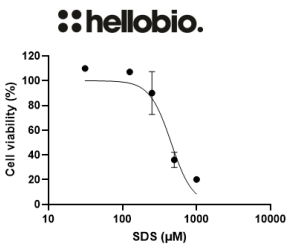
- Ready to use solution
- Results after 1-4 hour incubation
- The Cell Counting Kit-8 assay is more sensitive than other tetrazolium salt-based assays such as XTT, MTS and MTT.
- Low cytotoxicity and high stability make this kit suitable for long incubation time (24-48 hours)

Biological action	Reagent
Description	Ready to use solution for colorimetric quantitation of viable cell number.

Images







Biological Data

Application notes

Cell number determination

1. Plate cells at 100 µL/well in a 96 well plate and pre-incubate in a humidified incubator (37°C, 5% CO_2).
2. Add 10 µL of CCK-8 solution to each well of the plate.
3. Incubate for 1-4 hours in the incubator. Incubation time varies on cell type and cell number.
4. Measure absorbance at 450nm in a microplate reader.

Cell proliferation and cytotoxicity assays

1. Plate cells at 100 µL/well at a denisity of 10^4 to 10^5 cells per well. Incubate cells in a humidified incubator (37°C, 5% CO_2) for 24 hours and add compounds to be tested at an appropriate timepoint.
2. Add 10 µL of CCK-8 solution to each well of the plate.
3. Incubate for 1-4 hours in the incubator. Incubation time varies on cell type and cell number.
4. Measure absorbance at 450nm in a microplate reader.

Notes

- The absorbance can be measured up to 24 hours later by addition of 10 µL of 0.1 M HCl or 1% w/v SDS to each well. The plate should be kept covered and away from light at room temperature.
- Avoid introducing bubbles into wells as they may interfere with OD readings.
- If there is high turbidity of the cell suspension measure the OD at 600 nm and subtract this value from 450nm readings.
- The CCK-8 assay uses dehydrogenase activity to detect live cells. Therefore cells, chemicals or conditions that alter dehydrogenase activity may result in discrepcencies between the actual vialable cell number and the CCK-8 assay used.
- The dye in CCK-8 assay kit may react with reducing agents, which may cause the colorimetrric change. If using reducing agents it is adviced to check the backgrounf OD.

Solubility & Handling

Storage instructions	+4 °C
Important	This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use

References

Comparison of Cytotoxicity Evaluation of Anticancer Drugs between Real-Time Cell Analysis and CCK-8 Method.

Cai L et al (2019) ACS omega 4
PubMedID 31460316

Cell Viability Assay with 3D Prostate Tumor Spheroids.

Oner E et al (2023) Methods in molecular biology (Clifton, N.J.) 2645
PubMedID 37202626

Comparative Evaluation of Corneal Storage Medias Used as Tooth Avulsion Medias in Maintaining the Viability of Periodontal Ligament Cells Using the Cell Counting Kit-8 Assay.

James N et al (2022) Clinical, cosmetic and investigational dentistry 14
PubMedID 35411190