

ADAM MC2

A new standard of
Automated Cell Counter

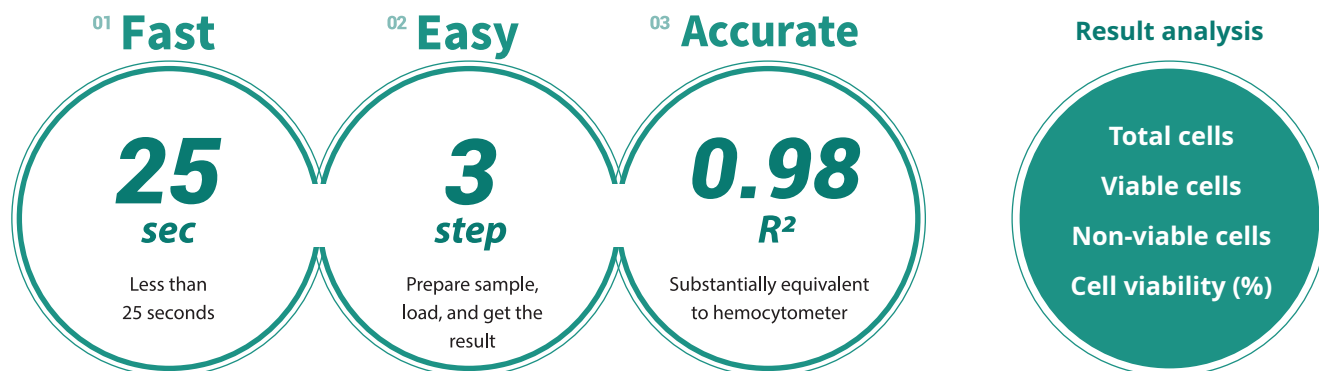
- Stem cell
- CAR-T cell
- CAR-NK cell
- Adipose-derived stem cell

Less than
25 sec



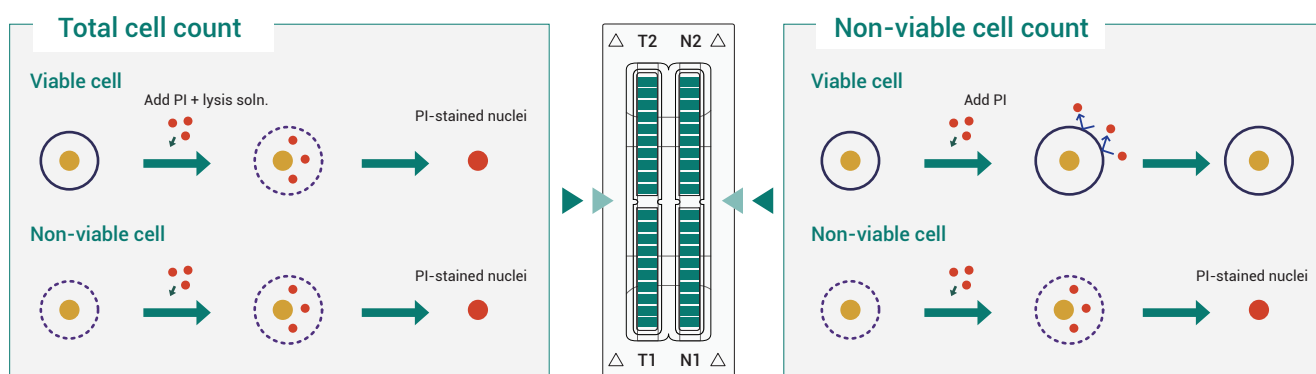
Most Accurate Nucleus Cell Counter

ADAM-MC2 is a new standard of automated fluorescence cell counter. ADAM stands for Advanced Detection and Accurate Measurement. ADAM-MC2 utilizes sensitive fluorescence dye staining, LED optics and CMOS detection technologies to make the cell analysis more accurate and reliable. It measures the number of total cells, viable cells, non-viable cells and shows viability results. Combined with a disposable microfluidic chip, the operation is now extremely simple, easy, and cost-effective.



Principle of Viability Measurement (PI-Staining Method)

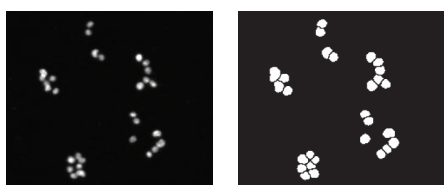
After the samples are stained with fluorescent dye, propidium iodide, which intercalates DNA to stain the nucleus of target cells, ADAM-MC takes fluorescent images automatically. The obtained images are processed by image analysis software integrated inside the system.



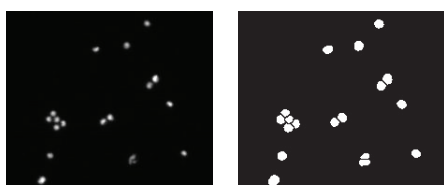
* There are two types of disposable chips: 2 channel and 4 channel

Counting Aggregated and Irregular-Shaped Cells

HepG2
(Clumped cell line)



HeLa



ADAM-MC2 provides accurate and reliable results because it counts aggregated and irregular-shaped cells.

- Accurate count based on cell size and shape
- Count aggregated cells individually
- Debris is excluded from results

Among the images on the left, the images on the right side indicate cells that have been counted by ADAM-MC2.

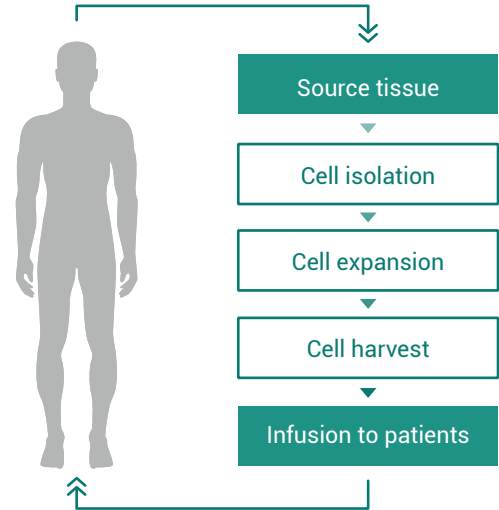
Cell Therapeutic Applications

ADAM-MC2 can be used as a device for monitoring and QC of the cell numbers and viability in the process of manufacturing cells (CAR-T cells, stem cells, etc.) for Cell Therapy.

In addition, it is possible to use ADAM-MC2 depending on the cell types (Whole blood cell, PBMCs, etc.) that needs to be monitored during the manufacturing of cell therapy products.

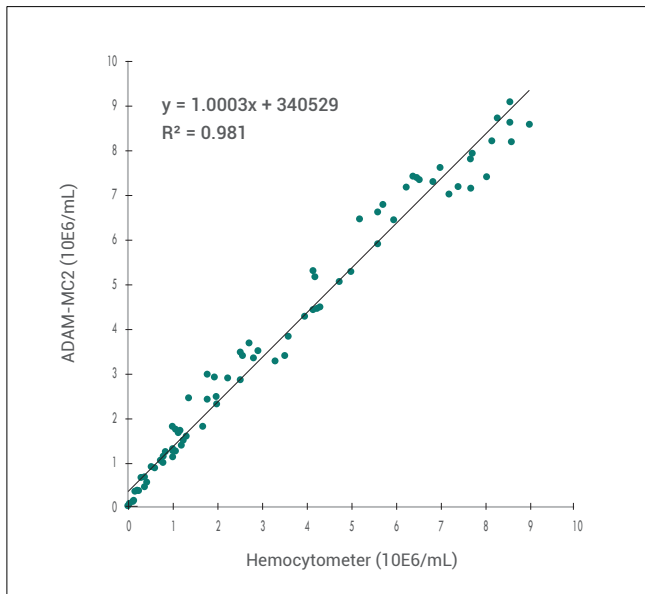
Application

- | | |
|------------------------------|---------------------|
| 01 Stem cell | 05 Whole blood cell |
| 02 CAR-T cell | 06 Aggregated cell |
| 03 CAR-NK cell | 07 PBMCs |
| 04 Adipose-derived stem cell | ⋮ |

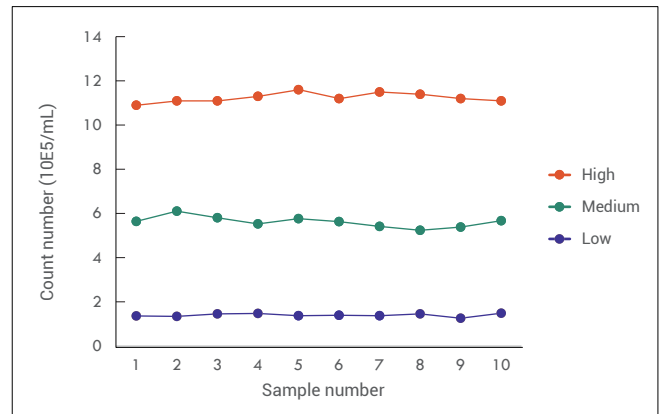


Accuracy & Repeatability

Correlation of total cell counting between hemocytometer and ADAM-MC2 using SH-SY5Y cells.

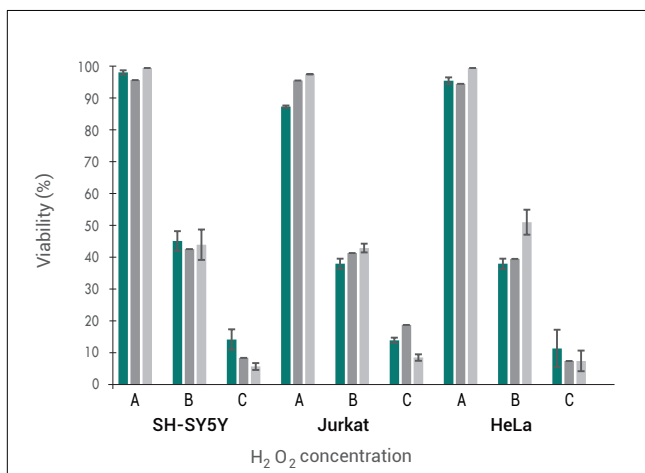


Sample with low, medium and high concentration of cells were counted with ADAM-MC2. The repeatability at each level of cell concentration is high.



	High n=10	Medium n=10	Low n=10
MEAN	1.12E+06	5.62E+05	1.40E+05
SD	21187.00	24679.28	7103.21
CV	1.88	4.39	5.06

Comparison of Cell Viability



Comparison of cell viability between ADAM-MC2, flow cytometry, and manual counting.

SH-SY5Y, Jurkat, HeLa cells were treated with 100, 300 μM H₂O₂ for 3 hours, then analyzed by ADAM-MC2, flow cytometry, and manual counting.

Legend: ■: ADAM MC2, ■: FACS, ■: Manual count
A: Untreated / B: 100 μM / C: 300 μM

Specifications

ADAM-MC2

Cat No. ADAM-MC2

Hardware	
Focus	Auto-focusing
LED	4W Green LED
Weight	7.0 kg
Size (LxWxH)	277 x 276 x 270mm



Accuchip Kit

Cat No. AD2K-200 (2 channel) | AD4K-200 (4 channel)

Performance	2channel	4channel
Analysis time	< 50 sec/test	< 25 sec/test
Loading volume	23 uL	13 uL
Measuring volume	8.6 uL	3.4 uL
Measurement range	5 X 10 ⁴ ~ 4 X 10 ⁶ cells/mL	



Ordering Information

Catalog Number	Product Name
ADAM-MC2	ADAM-MC2
AD2K-200	Accuchip 2x Kit (2 channel, Max. 400 tests/kit)
AD4K-200	Accuchip 4x Kit (4 channel, Max. 800 tests/kit)

*AD2K-200: please consult your distributor or manufacture for availability.

Catalog Number	Product Name
ADR-1000	Accustain Solution
ADB-500	ADAM Calibration Bead