100% Chemically Defined Cell Supplement

CytoMore™ Cell Rescue Supplement (CCRS)

- Animal-free and protein-free formula
- Lot-to-lot consistency
- Cost effective

CytoMore™ Cell Rescue Supplement (CCRS) are defined chemical components in powder form. It is developed to improve cell culture condition. CCRS has excellent performance for low vitality cells, such as primary cells, mesenchymal stem cells (MSC) or frozen cell lines. To determine the optimal concentration of CCRS to the desired cell, follow the operation manual to create five working mediums under instructed ratio for evaluation.

Fig 1. CytoMore™ Cell Rescue Supplement (CCRS).

Q1. What are the components of CCRS?

CCRS is a unique formulation of a wide variety of amino acids and vitamins. It contains no proteins, lipids, or growth factors.

Q2. What type of the cells that CCRS works?

CCRS is used as rescue supplement for cells with poor growth problems. CCRS has been tested its performance in culturing of the neuron cells, the primary cells and the mesenchymal stem cells (Fig. 2). The results show different working ratios among the three types of cells. 1X working ratio for neuron cell (Fig. 2A), 1/4X working ratio for primary cell (Fig. 2B), 1/8X working ratio for mesenchymal stem cell (Fig. 2C). The working ratio might vary from cell types and the cell conditions, therefore, conducting the optimal ratio test is necessary for the first use.

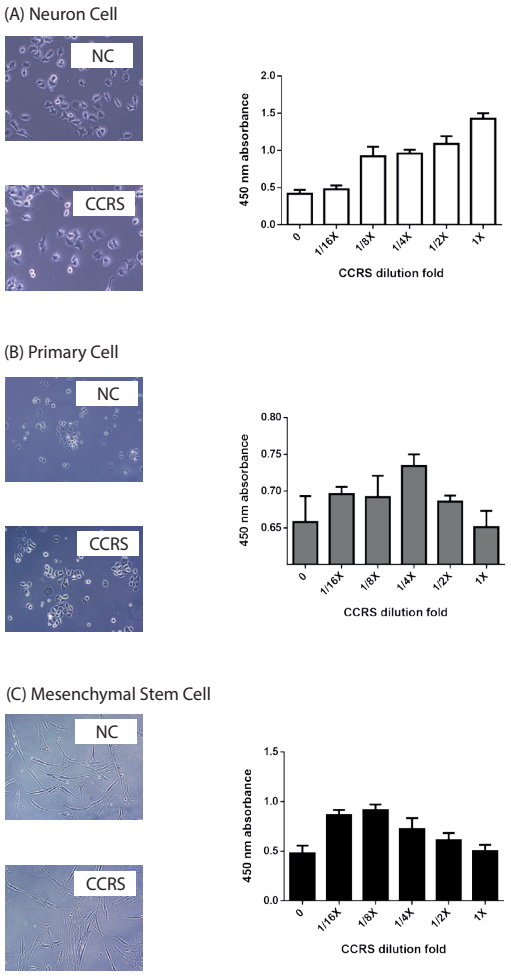

Fig. 2 Optimal test results with demostration of cell morphology images of negative control (NC) and after addition of CCRS. (A) Neuron cell. (B) Primary cell. (C) Mesenchymal stem cell.

Q3. How to use CCRS?

At the first use, follow the protocol and make five working ratio by mixing CCRS with the culture media for the desired cell.

1. Label five 50 mL Centrifuge tubes for serial dilutions as follows: #1 (1X); #2 (1/2X); #3 (1/4X); #4 (1/8X); #5 (1/16X)
2. Add 25 mL regular culture media, such as DMEM or RPMI-1640 based media with 10% fetal bovine serum and antibiotics into tube #2, #3, #4, #5.
3. Reconstitute CCRS by 0.5 mL ddH_2O. The stock solution should be stored at 2-8 °C for several weeks.
4. Dilute the stock solution into 49.5 mL regular culture media.
5. Sterile the culture media containing CCRS by filtering through 0.22 μm filters to tube #1.
6. Transfer 25 mL of media from tube #1 into tube #2 and mix well.
7. Transfer 25 mL of media from tube #2 into tube #3 and mix well. Continue to transfer and mix through tube #5 (see the follow -ing table for CCRS serial dilution).

Tube	Volume of media (mL)	Volume and source of tube (mL)	Final CCRS dilution fold
#1	49.5	0.5 of Stock	1X
#2	25	25 of tube #1 dilution	1/2X
#3	25	25 of tube #2 dilution	1/4X
#4	25	25 of tube #3 dilution	1/8X
#5	25	25 of tube #4 dilution	1/16X

Q4. How to choose the working ratio?

Each media containing CCRS serial diluted could be evaluated at least for a duplicate T75 flask or a 6-well plate. Conduct cell vitality assay to confirm the optimal ratio.

Ordering information

Product	Size	Code
CytoMore™ Cell Rescue Supplement	1 bottle	CT01-1BT

Product	Size	Code
HybriMore™ Cell Culture Supplement	1 bottle	HB01-1L

For inquiry, please contact us via email at bio@energenesis-biomedical.com