

Transient expression medium for HEK293 cells

KP293 type 1 Expression medium

[+] L-Alanyl-L-Glutamine

- Manufactured in Japan at KYO's factory
- Can be used for transfection using lipofection or polyethyleneimine methods
- Serum-free medium with defined chemical composition
- No animal-derived ingredients • Protein free



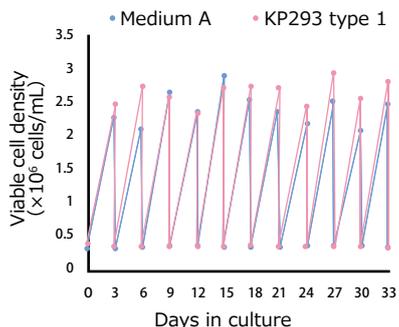
What is KP293 type 1 Expression Medium?

This medium is for suspension and agitation culture of human fetal kidney cell-derived 293 cells (e.g. FreeStyle 293-F cells, etc.). It can be used for expression and production of recombinant proteins using 293 cells.

Example: FreeStyle 293-F cells

In the experiment, cells that had been adapted to this medium were used.

A. Cell proliferation

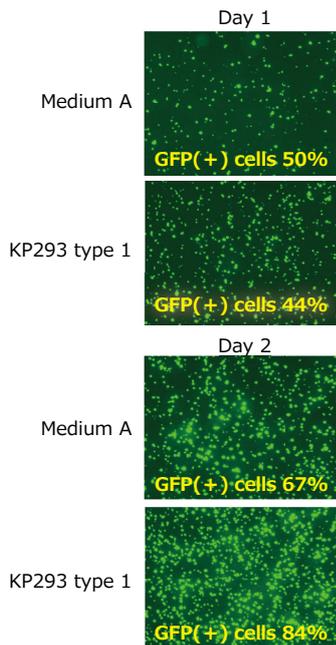


[Culture conditions]

Seeding density : 0.35 x 10⁶ cells/mL
 Culture area : 125 mL flask
 Medium volume : 20 mL
 Culture method : shake culture (135 rpm)
 Culture conditions : 37 °C, 5% CO₂

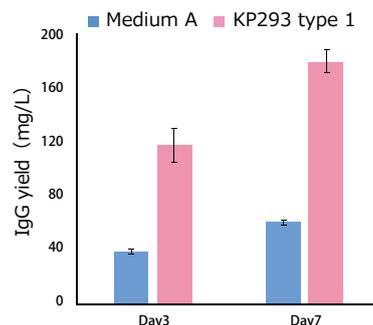
Under the conditions outlined above, the cells were cultured in KP293 type 1 Expression Medium, as well as in a commercially available medium (Medium A). By day 3 of culture, a cell density of over 2 x 10⁶ cells/mL was observed, and stable proliferation was maintained through 10 passages.

B. Transfection efficiency (percentage of GFP-expressing cells)



Using PEI MAX[®] (Polysciences, Inc.), GFP plasmid was transfected into the cells. The number of GFP-positive cells was measured by flow cytometry. Fluorescence images taken at 24- and 48-hours post-transfection. When KP293 type 1 Expression Medium was used, a higher percentage of GFP-positive cells was observed compared with the commercially available medium.

C. Expression level of Rabbit IgG (whole molecule)



[Transfection conditions]

Transfection reagent : PEI MAX[®]
 Numbers of cells : 2.0-2.5 x 10⁶ cells/mL
 Cell viability > 95%
 Reagent volume : 5.0 µL/mL
 DNA volume : 1.0 µg/mL
 HC:LC : 1:2
 Medium volume : 30 mL
 Shaking speed : 135 rpm
 Culture conditions : 37 °C, 5% CO₂

Under the conditions described above, transfection was performed, and the IgG expression levels on days 3 and 7 of culture were measured using the Octet[®] system (Protein A). When KP293 type 1 Expression Medium was used, approximately a three-fold increase in IgG expression was observed compared with the commercially available medium.

Precautions for Use and Handling ※Please read the following instructions carefully before use.

- (1) Perform all operations under sterile conditions.
- (2) Avoid freezing this product and store it according to the storage instructions. Do not use the reagents if they have been frozen, as this may cause deterioration and lead to unexpected performance.
- (3) Do not use reagents past their expiration date.
- (4) Do not use the product if the container is damaged or if any foreign matter is found inside.
- (5) When disposing of this product, treat it as infectious waste. Disposal methods vary by municipality, so please follow the regulations of your local authority.

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