

## Thermo Scientific HyClone SFM4Transfx-293™

**Thermo Scientific HyClone SFMTransfx-293 is a serum-free, animal derived component free medium designed to support the growth of HEK 293 cultures and promote transfection using lipofection or similar methods. This regulatory-friendly medium was developed through the Metabolic Pathway Design™ to support high transfection efficiency, productivity and cell density in suspension cultures.**

### Features

- Animal Derived Component Free
- Supports high transfection efficiency
- Metabolically designed for high cell yield and recombinant protein/vector production
- Allows for direct or sequential adaptation
- Component traceability
- Manufactured under cGMP

### Specifications

- Contains Pluronic® F-68 (Liquid Only)
- Does not contain L-glutamine
- Does not contain Phenol-Red

### QC Testing

Test	Specification
Appearance	Clear Solution
Osmolality	290-340 mOsm/kg
pH	7.0-7.4
Sterility	No Growth
Endotoxin	<1.0 EU/mL
Application Testing	Growth Promotion

### Suggested Preparation

Reconstitution of HyClone SFM4Transfx-293 DPM (SH30861)

- 1 While stirring, add SH30861 to cell culture grade water (20-25°C) at 90 percent of final preparation volume (19.5 g/L). Mix until dissolved. Medium should be a clear, golden solution at this point.
- 2 Add 1.0 g/L Pluronic® F-68 and 2.0 g/L sodium bicarbonate. Ensure each component has completely dissolved before adding the next component.
- 3 Bring vessel to final volume with cell culture grade water. Allow solution to mix for 10-20 minutes.
- 4 Adjust pH to between 7.0 and 7.2 by adding 1 N NaOH, or 1N HCl dropwise to solution.
- 5 Check osmolality. Expected value is 290-340 mOsm/kg
- 6 Sterile filter into desired container using a 0.2 micron sterile filter.

### Preparation Notes

HyClone SFM4Transfx-293 DPM (SH30861) does not contain L-glutamine. Recommended concentration: 4 mM. Liquid and DPM HyClone SFM4Transfx-293 should be stored at 2-8°C away from light.



### Culture Recommendations

- 1 Cultures should be incubated at 37°C and in a 5 percent CO<sub>2</sub> environment.
- 2 Adaptation of 293 cells from adherent and serum rich conditions is best achieved using a two-step process. First, adaptation to serum-free suspension conditions is achieved using HyClone SFM4HEK293 or HyClone CDM4HEK293. Once cells have adapted to this SFM they can be directly adapted to HyClone SFM4Transfx-293.

### Direct Adaptation

1. Transfer cell grown in current serum-free media directly into HyClone SFM4Transfx-293 at 3.0 x 10<sup>5</sup> cells/mL.
- 2 Passage cells every 3 to 4 days.
- 3 Adaptation is complete once cells have transitioned to a rate of 24 h per doubling.

## Cell Maintenance

Maintain adapted cells by establishing a passage schedule that allows the cells to be passed while in log growth phase. HEK 293 cells cultivated in HyClone SFM4Transfx-293 should be subcultured every 3 to 4 days (72 to 96 h). The passage schedule and seeding density may be adjusted to optimize performance. The recommended cell seeding density of new cultures for general maintenance is  $3 \times 10^5$  cells/ml. The culture viability of an adapted culture should remain greater than 90 percent. However, during adaptation from serum-containing medium viabilities may be slightly lower than 90

percent. Cells should exhibit a population doubling time of approximately 24 h. If the recommended seed density of  $3.0 \times 10^5$  cells/mL is used, cultures typically reach approximately  $2.5$  to  $3.5 \times 10^6$  cells/ml after 72 h and  $5.0$  to  $6.0 \times 10^6$  cells/ml after 96 h. Doubling times during an adaptation period may be higher. Seed stock does not require centrifugation for spent medium removal unless the seeding volume is greater than 50 percent of the culture working volume. This may occur during adaptation, but should not be the case during general culture maintenance.

## Cryopreservation

HyClone SFM4Transfx-293 adapted cells can be cryopreserved in a medium consisting of a 1:1 ratio of fresh and conditioned HyClone SFM4Transfx-293. To this add DMSO at a final concentration of 7.5 percent.

## Ordering Information

Name	Part Number/Unit Size	Description							
HyClone SFM4Transfx-293™ Liquid	SH30860.01	500 mL Bottle							
	SH30860.02	1000 mL Bottle							
	SH30860.LS	6 x 1000 mL Bottles							
	SH30860.04	5 L BPC: Hanging Pillow							
	SH30860.05	10 L BPC: Hanging Pillow							
	SH30860.06	20 L BPC: Hanging Pillow							
	SH30860.07	50 L BPC: 3D Bag							
	SH30860.08	100 L BPC: 3D Bag							
	SH30860.09	200 L BPC: 3D Bag							
	SH30860.10	500 L BPC: 3D Bag							
	SH30860.11	900 L BPC: 3D Bag							
HyClone SFM4Transfx-293™ Powder	SH30861.01	1 x 5 L							
	SH30861.02	1 x 10 L							
	SH30861.03	1 x 50 L							
	SH30861.04	1 x 100 L							
	SH30861.05	1 x 500 L							
	SH30861.06	1 x 1000 L							
<b>Related Products</b>									
HyClone CDM4HEK293™	SH30858	4 mM L-glutamine (Liquid)							
	SH30859	No L-glutamine (Powder)							
HyClone Cell Boost™ Kit	SH30890	6 x 100 g	Amino Acids	Vitamins	Glucose	Trace Elements	Growth Factors	Lipids	Cholesterol
		Cell Boost 1	✓	✓	✓				
		Cell Boost 2	✓	✓	✓				
		Cell Boost 3	✓	✓	✓	✓			
		Cell Boost 4	✓	✓	✓	✓	✓		
		Cell Boost 5	✓	✓	✓	✓	✓	✓	✓
		Cell Boost 6	✓	✓	✓	✓	✓	✓	✓

