

## EX-CELL™ Serum-Free Media for CHO Cells

### EX-CELL™ 302

#### Serum Free-Medium for CHO Cells

EX-CELL™ 302 is a serum-free medium, which has been specifically developed for the long-term growth of transformed Chinese Hamster Ovary (CHO) cells in suspension for the expression of antibodies or protein products. EX-CELL™ 302 is an appropriate medium for use with the DHFR<sup>-</sup> or Glutamine Synthetase, or the GS System™, because it does not contain hypoxanthine, thymidine or L-glutamine. If EX-CELL™ 302 is to be used with CHO cells transformed using the GS selection the media needs to be supplemented with GS Supplement 50X (Catalog No. 58672) for the additional amino acids and nucleosides. For use with DHFR<sup>-</sup> selection system we recommend the addition of 4 mM L-glutamine for optimal growth.

Due to current regulatory concerns about the sources of raw materials, EX-CELL™ 302 was developed using only recombinant human proteins that have molecular weights less than 10 kD. The total protein concentration found in EX-CELL™ 302 is less than 1 mg/L. Pluronic® F68 has been added at a final concentration of 0.1% to EX-CELL™ 302 to protect against shear damage in sparged bioreactor systems.

### EX-CELL™ 325 PF CHO

#### Serum Free-Medium for CHO Cells

EX-CELL™ 325 PF CHO is a protein-free, animal-component free medium which has been developed for the growth of Chinese Hamster Ovary (CHO) cells. Because it contains no large macromolecules, EX-CELL™ 325 PF CHO facilitates the isolation and purification of secreted proteins from the cells. CHO cells propagated in EX-CELL™ 302 serum-free media (Catalog No. 14324/24324 or 14326/24326) can be transferred directly into this protein-free medium without extensive weaning protocols.

This medium is supplied without L-glutamine and does not contain purines or pyrimidines to provide an appropriate medium for specialized CHO cell lines (i.e., Glutamine Synthetase, or the GS System™, and DHFR<sup>-</sup> selection systems).

### EX-CELL™ CD CHO

#### Serum Free-Medium for CHO Cells

EX-CELL™ CD CHO is a chemically defined, animal-component free, serum-free medium developed for the long-term growth of Chinese Hamster Ovary (CHO) cells and expression of antibodies or protein products in suspension culture. CHO suspension cultures can be subcultured directly into EX-CELL™ CD CHO from serum-supplemented or serum-free medium with little or no adaptation. EX-CELL™ CD CHO (Catalog No. 14360/24360) is formulated without hypoxanthine, thymidine and L-glutamine, making it an appropriate medium for selection systems such as DHFR<sup>-</sup> and Glutamine Synthetase (GS System™). For applications that do not require the selective pressure of a hypoxanthine/thymidine (HT)-deficient medium, we recommend the use of EX-CELL™ CD CHO with hypoxanthine and thymidine (Catalog No. 14361/24361).

Refer to product comparison chart inside publication for additional information regarding EX-CELL™ 302, EX-CELL™ 325 PF CHO and EX-CELL™ CD CHO.

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The GS System™ is a trademark of Lonza Biologics.  
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# Product comparison chart: EX-CELL™ 302, EX-CELL™ 325 PF CHO, EX-CELL™ CD CHO

	EX-CELL™ 302				EX-CELL™ 325 PF CHO		EX-CELL™ CD CHO			
Catalog Number	14324	24324	14326	24326	14340	24340	14360	24360	14361	24361
Format	Liquid Medium	Dry Powder	Liquid	Dry Powder	Liquid	Dry Powder	Liquid	Dry Powder	Liquid	Dry Powder
Standard Sizes	500 mL 1000 mL	1 L 5 L 10 L 50 L 100 L	500 mL 1000 mL	1 L 5 L 10 L 50 L 100 L	500 mL 1000 mL	1 L 5 L 10 L 50 L 100 L	500 mL 1000 mL	1 L 5 L 10 L 50 L	500 mL 1000 mL	1 L 5 L 10 L 50 L
Applicable Systems	Suspension				Suspension		Suspension			
Protein Level	< 1 mg/L				None		0.1 mg/L			
Protein Source**	Recombinant				N/A		Recombinant			
Hydrolysate Source	Plant				Plant		N/A			
L-glutamine	No, Recommend adding 4 mM				No, Recommend adding 4 mM		No, Recommend adding 8 mM			
Pluronic® F68	0.1%				0.1%		0.1%			
Glucose	3.42 g/L				3.45 g/L		5.6 g/L			
Hypoxanthine & Thymidine	No				No		No		Yes	
Phenol red	Yes		No		Yes		No			
HEPES	7.5 mM				7.5 mM		No			
MOPS	No				No		15 mM			
Sodium bicarbonate	Yes, 1.60 g/L	No, add 1.60 g/L	Yes, 1.60 g/L	No, add 1.60 g/L	Yes, 1.60 g/L	No, add 1.60 g/L	Yes, 2.10 g/L	No, add 2.10 g/L	Yes, 2.10 g/L	No, add 2.10 g/L

\*Catalog numbers with the asterisk replace the previous catalog number, and include an alternate source of soy hydrolysate to that found in the original formulation. With more consistent performance and improved filtration characteristics, the alternate hydrolysate will improve the overall performance and consistency of these EX-CELL™ products. Comparability testing utilizing the previous soy hydrolysate and the replacement hydrolysate demonstrated comparable growth-promoting characteristics.

\*\*All protein products of bovine origin are collected from USDA approved sources.

The formulations for all EX-CELL™ Serum-Free Media are proprietary to SAFC Biosciences.

For more information about this subject or other SAFC Biosciences' products and services, please contact Technical Services.