

for stimulation of cell proliferation, suppression of cell death, and cryopreservation of cells



Pure Sericin™

A protein derived from silkworms

Wako Catalog No. 167-22681 (1 g)
163-22683 (5 g)



Pure Sericin is a protein derived from the silkworm cocoon, which is produced from Seiren Co., Ltd.. It has been reported that an addition of 0.1%(w/v) sericin to the media stimulates cell proliferation and suppresses cell-death.^{1),2)} Furthermore, when 1%(w/v) sericin and DMSO are added to the media, it can be used as a serum free freezing medium.³⁾ It is applicable as a useful component of serum free media.

Application for monoclonal antibody production system of Hybridoma cell

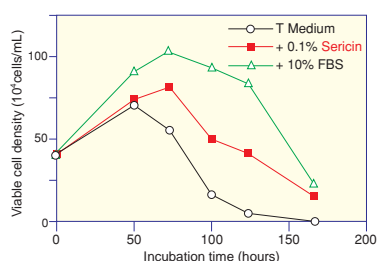


Figure 1. Change in density of living cell

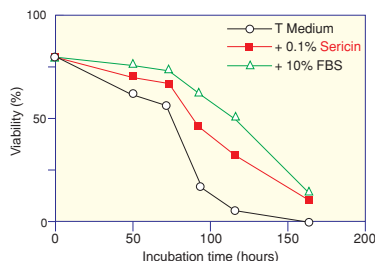


Figure 2. Change in survival rate

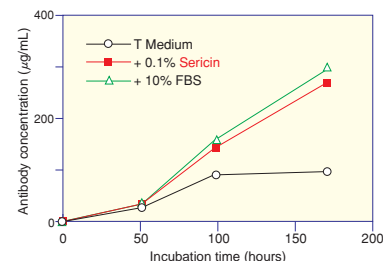


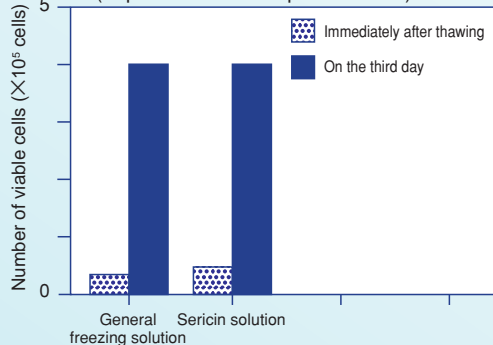
Figure 3. Antibody concentration in culture supernatant

The following three conditions for media were compared: Proliferation of hybridomas was examined in Daigo's T Medium (Nihon Pharmaceutical Co., Ltd. ; Wako Cat. #395-00581, 10x for 1 L) as a basal medium. ①Daigo's T Medium only, ②Daigo's T Medium with 0.1% sericin, ③10% FBS-added Daigo's T Medium. As a result, Daigo's T Medium with 0.1% sericin improved viable cell density and viability more efficiently compared to Daigo's T Medium only (Figure 1, Figure 2). In addition, antibody production competence in Daigo's T Medium with 0.1% sericin and with 10% FBS are equivalent (Figure 3).

(Data: Provided by Satoshi Terada, Department of Applied Chemistry and Biotechnology, University of Fukui, Japan)

Examination of freezing at -80°C and thawing, a survey on Human hepatoblastoma HepG2 cell line

Number of living cells after freezing and thawing (hepatoblastoma HepG2 cell line)



HepG2 cells were suspended in the following freezing solution to make each vial to contain approximately 20×10^4 cells. The vials were kept frozen for 3 days at -80°C. After thawing, the cells were incubated for three days and the number of viable cells was counted.

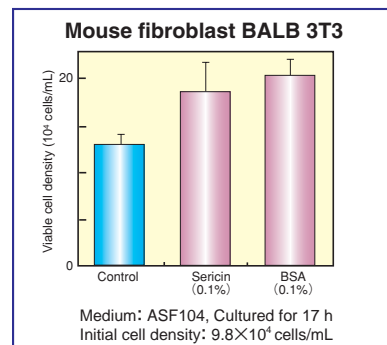
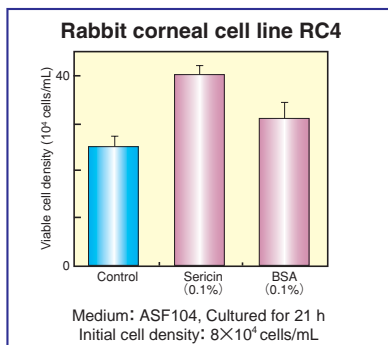
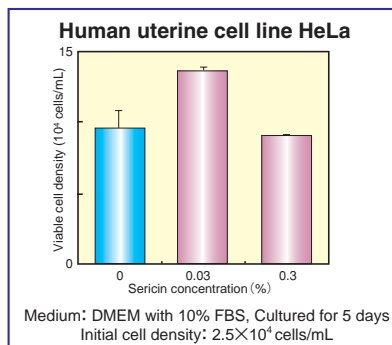
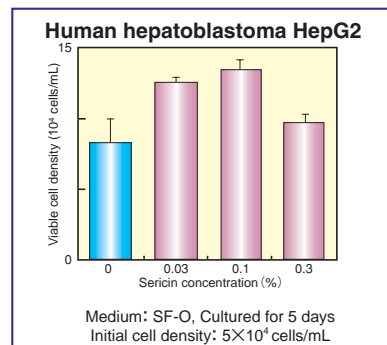
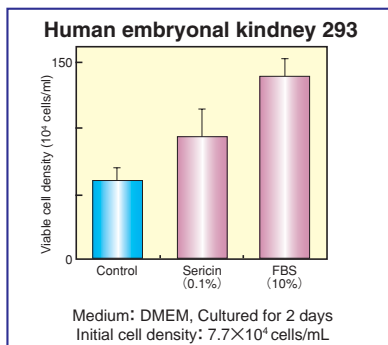
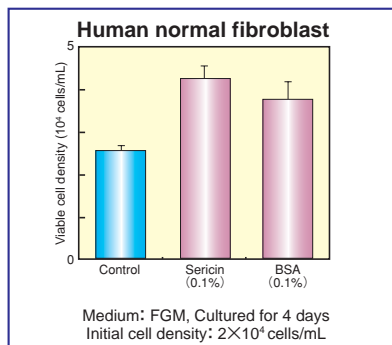
1. General freezing solution (90% FBS + 10% DMSO)
2. Sericin solution (PBS solution containing amino acids, 1% sericin, and 10% DMSO)

(Provided by Satoshi Terada, Department of Applied Chemistry and Biotechnology, University of Fukui, Japan)

References

- 1) Terada, S., Nishimura, T., Sasaki, M., Yamada, H. and Miki, M.: *Cytotechnology*, **40**, 3 (2002)
- 2) Terada, S., Sasaki, M., Yanagihara, K. and Yamada, H.: *J. Bioscience and Bioengineering*, **100**, 667(2005)
- 3) Sasaki, M., Kato, S., Yamada, H. and Terada, S.: *Biotechnol. Appl. Biochem.*, **42**, 183(2005)

Stimulation of proliferation for various cells



Description	Pkg. Size	Wako Cat. No.	Grade
Pure Sericin™	1 g	167-22681	for Cell Culture
	5 g	163-22683	

Related Products



Liquid Culture Medium							
Description	Noting				Pkg. Size	Wako Cat. No.	Grade
	L- Glutamine	Phenol Red	Pyruvic Acid	HEPES			
D-MEM (High Glucose)	●	●			500 mL	044-29765	for Cell Culture
	●	●	●		500 mL	043-30085	
	●	●		●	500 mL	048-30275	
		●			500 mL	045-30285	
					500 mL	040-30095	
D-MEM (Low Glucose)	●	●	●		500 mL	041-29775	
E-MEM	●	●			500 mL	051-07615	
MEM α	●	●	●		500 mL	135-15175	
RPMI-1640	●	●			500 mL	189-02025	
	●	●		●	500 mL	189-02145	
	●	●			500 mL	186-02155	
		●			500 mL	183-02165	
Ham's F-12	●	●	●		500 mL	087-08335	
Ham's F-12K (Kaighn's Modification)	●	●	●		500 mL	080-08565	
D-MEM/Ham's F-12	●	●	●		500 mL	048-29785	
Balanced Salt Solution							
Description					Pkg. Size	Wako Cat. No.	Grade
HBSS(-) with Phenol Red					500 mL	084-08345	for Cell Culture
D-PBS(-)					500 mL	045-29795	
10XD-PBS(-)					500 mL	048-29805	

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