

# 特殊培養基選購指南

Hybridoma Express Media

Insect Cell Culture Media

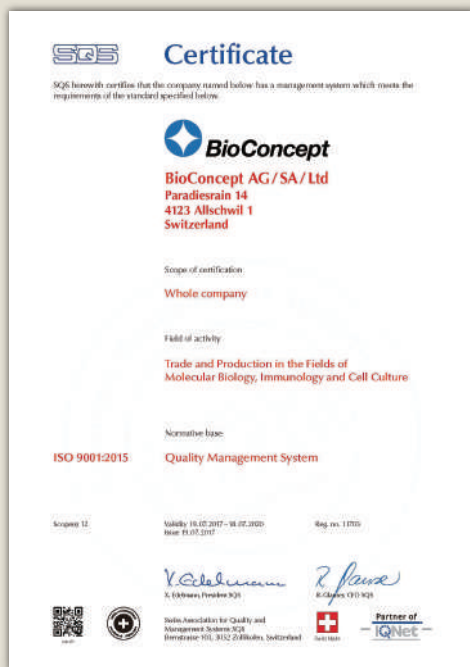
SF-4 Baculo Express Medium

BSK-H Medium for the cultivation of *Borrelia spec.*

Stem Cell Media



# Who we are



## 關於 BioConcept

BioConcept 總部位於瑞士的製藥中心，配合生物製藥廠來生產專用細胞培養基和各類緩衝液。BioConcept 所開發的專用細胞培養基產品組合，適用於各種細胞類型 (CHO、BHK、幹細胞、融合瘤細胞、昆蟲細胞等)。除了專有的培養基配方外，BioConcept 還為其生物製藥客戶客製專屬培養基配方。BioConcept 的培養基生產設施包括容量高達 5,000 公升的分離式 ACF / 非 ACF 液體培養基設施以及高達 800 公斤 / 批次的粉末培養基研磨和混合設施，所有這些設施均已通過 ISO 認證並符合 GMP 要求。使用最先進的設施 WFI (注射用水) 和自動化灌裝系統，以確保高質量的產品生產和快速的生產系統。




Powder Mill



Automated Bottle Handling



Automated Media Filling



百歐生醫 AllBio Life 為 BioConcept 於亞洲區獨家授權經銷商與特殊培養基合作開發實驗室，百歐在台灣與寧波同時都有設立生物醫學實驗室，百歐的實驗室擁有 ISO17025 的實驗室品質管制認證。在美國、新加坡與泰國也設有駐點辦公室負責業務推廣。

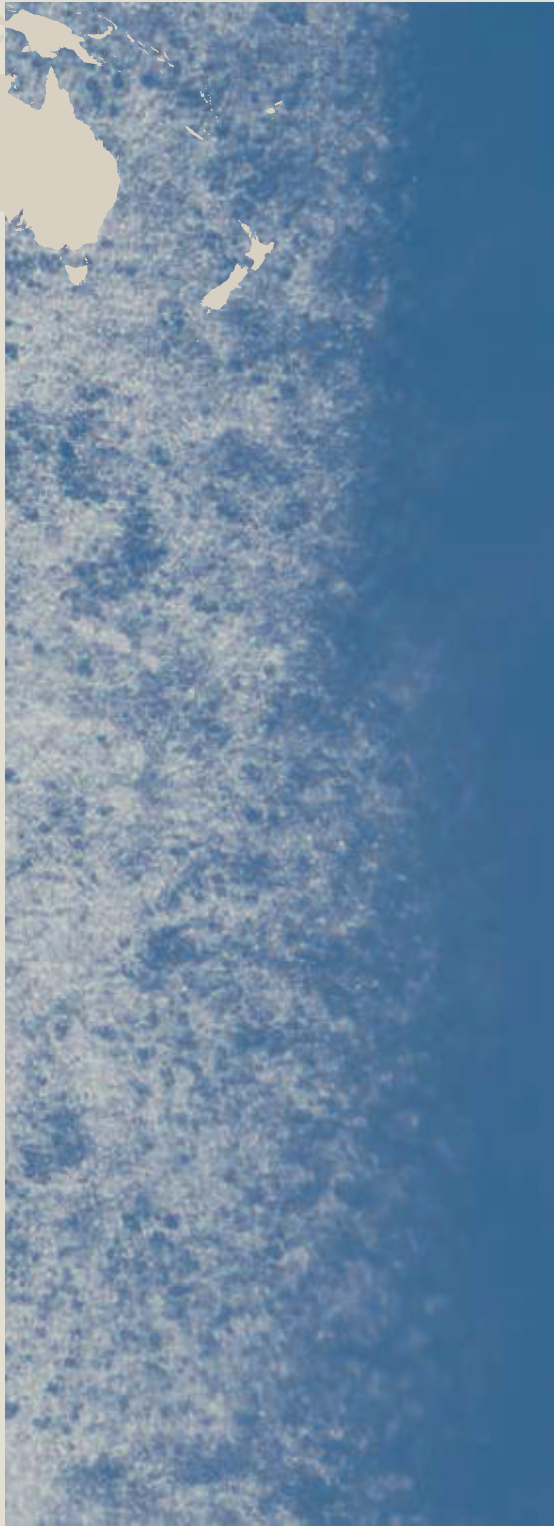
### **Our product line includes**

- Special customer-designed media
- Contract manufacturing of sterile liquids and powder formulations
- Production media for CHO, Hybridoma and Insect Cells
- Individual solutions for your cell culture requirements
- Complete cell systems applications for CHO cells
- Standard media
- Serum-free and ACF (Animal Component Free) media
- Liquid as well as powder media formulations
- Buffers and balanced salt solutions
- Supplements and auxiliary reagents
- Animal sera

**In addition to the broad range of cell culture products, we can offer the highest degree of flexibility and customization in a timely manner. Our customers have the following options**

- Modifications of standard products
- New products according to customers recipes
- Outsourcing of media production
- Variable batch sizes starting from 5 L up to 5000L (liquid) and 2 kg up to 800 kg (powder)
- Variable packaging sizes (1 ml up to 1000L) and packaging systems (PET/glass bottles, sterile bags, customized tubing systems, as well as customer specifications)
- Sterilization through sterile filtration (0.22  $\mu$ m) or hot air/vapour sterilization

Customized products can be delivered within six to eight weeks after the order has been placed, including QC. For more detailed information please contact us at [info@bioconcept.ch](mailto:info@bioconcept.ch).





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## Express Media for Hybridoma Cells

### HYGM 6 and 7 Express Media

"HYGM 6" 和 "HYGM 7" 是無血清融合瘤細胞生長培養基，適用於培養各種不同的融合瘤和生產單株抗體。如果要避免染色指示劑造成的影響，兩款培養基都可以選擇已添加或未添加酚紅指示劑。

HYGM-6 無血清培養基，已經內含重組胰島素。它是該培養基中唯一的蛋白質不存在其他蛋白質或不確定的水解產物。

HYGM-7 無血清培養基是純化學成分配置的培養基，不含任何不確定的水解產物或蛋白質。

### ISF-1 Serum-free medium for Hybridoma cell culture

ISF-1 無血清培養基，適用於融合瘤細胞培養和單株抗體生產。它包含谷氨酰胺不需要進一步補充。為了在生產過程中保護細胞免受物理剪力影響，培養基中包含了表面活性劑。ISF-1 中使用的 BSA 已通過 EDQM 認證。

注意：如果不額外補充脂蛋白，則 ISF-1 不適合膽固醇依賴性細胞系 (例如 NSO 及其相關變體) 細胞培養過程中全程使用無菌技術是必要的；因此，在大多數情況下請盡量避免使用抗生素。但是，在需要抗生素的情況下，已證明 ISF-1 與最常用的抗生素。(例如 gentamycin, puromycin 和 amphotericin B) 相容。

## Available Hybridoma Growth Media

Cat. No.	Description	Size	Serum free	Protein free	Animal Component free (ACF)	Formulation
<b>Express Media for Hybridoma cells</b>						
9-00F55-I	HYGM-6 Express, with phenol red	500 ml	x			Proprietary
9-00F57-I	HYGM-6 Express, w/o phenol red	500 ml	x			Proprietary
9-00F58-I	HYGM-7 Express, w/o phenol red	500 ml		x	x	Proprietary
9-00F67-I	HYGM-7 Express, with phenol red	500 ml		x	x	Proprietary
1-57S97-I	ISF-1 Hybridoma Growth Medium	500 ml	x		x	Proprietary

## Available Insect Cell Culture Media

Cat. No.	Description	Size	Serum free	Protein free	Formulation
9-00F38-I	SF-4 Baculo Express ICM "ready to use"	500 ml	×	Contains yeast extract as only undefined component	Proprietary
9-00F38-K	SF-4 Baculo Express ICM "ready to use"	1 L	×	Contains yeast extract as only undefined component	Proprietary
9-07S38-I	SF-4 Baculo Express (1.1 × conc.) w/o yeast extract, w/o L-Valine	500 ml	×	×	Proprietary
9-10S38-I	SF-4 Baculo Express (1.1 × conc.) w/o yeast extract, w/o L-Methionine	500 ml	×	×	Proprietary
9-05S38-I	SF-4 Baculo Express (1.1 × conc.) w/o yeast extract, w/o L-Tyrosine	500 ml	×	×	Proprietary
9-02S38-I	SF-4 Baculo Express (1.1 × conc.) w/o yeast extract, w/o amino acids	500 ml	×	×	Proprietary
1-12F20-I	TC-100 Insect Cell Culture Medium	500 ml	Heat Inactivated Serum needs to be added		
1-12F07-I	Grace's Insect Cell Culture Medium	500 ml	Heat Inactivated Serum needs to be added		See page 56 of the main catalogue
1-43F00-I	Schneider's <i>Drosophila</i> Medium w/o L-Gln	500 ml		×	See page 59 of the main catalogue
1-43F02-I	Schneider's <i>Drosophila</i> Medium with L-Gln	500 ml		×	See page 59 of the main catalogue
1-34F00-I	Mitsubishi and Maramorosh	500 ml	Contains Lactalbumin- hydrosate and yeast extract		See page 58 of the main catalogue

## SF-Baculo Express Media

基於 SF-1 的優異表現，對昆蟲細胞的培養需求有進一步開發和深入研究，從而開發出了新型改良“即用型”昆蟲培養基。SF-4 已經在不同的學術和工業實驗室中成功使用。

### 特色

1. 細胞密度：在生物反應器和旋轉瓶中使用 SF-4 可以達到  $2 \times 10^7$  cells/ml 的密度。
2. 多功能性：不僅適用於 SF9 和 SF21，還適用於 High Five™ (officially called BTI-Tn-5B1-4) 和果蠅細胞。
3. 適應性：如果您由當前的血清補充培養基 (例如 TC-100 或 Grace's) 切換到我們的系統只需繼代 2~3 次。對於某些未包含動物蛋白的無血清培養基，則可直接切換。
4. 蛋白質產量：與以前使用的培養基相比，重組蛋白質生產中的蛋白質產量提高了 (2-3 倍)

### SF-4 Baculo Express ICM (Insect Culture Medium)

9-00F38 該無血清培養基為即用型，無需額外添加補充劑。

SF-4 Baculo Express ICM 是專屬配方，已成功用於培養各種斜紋夜蛾細胞 (SF9、SF21) BTI-TN-5B1-4 (High Five™) 和果蠅細胞 (D.Mel-2)。

如果需用於 NMR 同位素標記研究需求，可使用需額外補充氨基酸之 SF-4 相關培養基 (產品編號：9-02S38-1、9-05S38-1、9-10S38-1)

其他客製需求可聯繫 [service@allbioscience.com](mailto:service@allbioscience.com)



## 產品引用文獻

1. Schlaeger E.J. (1996) Medium Design for insect cell culture; (Cytotechnology) 20 57–70
2. Schlaeger E.J. (1996) The protein hydrolysate, Primatone RL, is a cost-effective multiple growth promotor of mammalian cell culture in serum-containing and serum-free media and displays anti-apoptosis properties; Journal of Immunological Methods 194 191–199
3. Schlaeger E.J., Foggetta, M., Vonach, J.M., Christensen, K. (1993) SF-1, a low cost culture medium for the production of recombinant proteins in baculovirus infected cells Biotechnology Techniques 7 (3) 183–188
4. Schlaeger, E.J., Loetscher, H., Gentz, R. (1992) Fermentation scale up: Production of soluble human TNF receptors. in Workshop on Baculovirus and recombinant protein production processes, Interlaken, Switzerland. Editors: J.M. Vlcek, E.-J. Schlaeger, A.R. Bernard
5. Ljunggren, J., Häggström, I. (1992) Glutamine limited fed-batch culture reduces the overflow metabolism of amino acids in myeloma cells. Cytotechnology 8 45–56
6. Law, J.H., Wells, M.A. (1989) Insects as biochemical models. (J.Biol.Chem.) 264 16335–16338
7. Grace, T.D.C. (1962) Establishment of four strains of cells from insect tissue grown in vitro Nature 195 788–789
8. Vaughn, J.L. (1968) A review of the use of insect tissue culture for the study of insect-associated viruses. .Top.Microbiol.Immunol. 42 108–128
9. Weiss, S.A., Smith, G.C., Kalter, S.S., Vaughn, J.L. (1981) Improved method for the production of insect cell cultures in large volume. In Vitro 17 495–502
10. Strauss A. et al (2003) Amino-acid-type selective isotope labeling of proteins expressed in Baculovirus-infected insect cells useful for NMR studies Journal of Biomolecular NMR 26 367–372
11. Gossert AD, Hinniger A, Gutmann S, Jahnke W, Strauss A, Fernández C. (2011) A simple protocol for amino acid type selective isotope labeling in insect cells with improved yields and high reproducibility. J Biomol NMR. Dec 51 (4): 449–456
12. Gossert AD, Jahnke W. (2012) Isotope labeling in insect cells. Adv Exp Med Biol. 992:179–196
13. Sitarska A, Skora L, Klopp J, Roest S, Fernández C, Shrestha B, Gossert AD. (2015) Affordable uniform isotope labeling with  $^2\text{H}$ ,  $^{13}\text{C}$  and  $^{15}\text{N}$  in insect cells. Journal of Biomolecular NMR 62, Issue 2, 191–197
14. Opitz C, Isogai S, Grzesiek S. (2015) An economic approach to efficient isotope labeling in insect cells using homemade  $^{15}\text{N}$ -,  $^{13}\text{C}$ - and  $^2\text{H}$ -labeled yeast extracts. Journal of Biomolecular NMR June 2015
15. Isogai S. et. al. (2016) Backbone NMR reveals allosteric signal transduction networks in the beta1-adrenergic receptor. Nature 530, 237–241



## BSK-H Medium for the Cultivation of *Borrelia spec.*

BSK-H 培養基適用於 *Borrelia spec.* 培養。BSK-H 培養基具有非常高的蛋白質和肽含量。該培養基特別富含核苷，並利用葡萄糖作為能源，同時含有高濃度的維生素。該培養基具備 N-Acetyl-D-Glucosamine，這是細菌中肽聚糖的必需成分。

### 參考建議

BSK-H 培養基選用高品質試藥來源，高規格的製程模組以及可控的 ISO 產線流程，可確保最終獲得高品質的產品，並具有可靠的批次穩定性、純度和細胞生長保障。由於在長期培養中，葡萄糖的代謝會發生乳酸積聚，這可能導致 pH 值升降超過 1 個 pH 單位，必須謹慎控制二氧化碳濃度以及 pH 值，添加足夠量的 HEPES 可確保長時間培養液中穩定的緩衝能力。在室溫下，滲透壓為  $420 \pm 20$  mOsm/kg H<sub>2</sub>O 時 pH 值為  $7.6 \pm 0.2$ 。接種前，必須在現成的培養基中補充 (3~8%) 的兔血清並在外瓶標籤註記。

BSK-H 培養基可廣泛用於螺旋菌的培養，特別是 *B. burgdorferi* 和 *B. hermsii*。僅需少量就足以進行接種培養。但文獻中與實際應用會發現與當下實驗操作狀態的不同而有差異，因此無法給出有關接種數量的一般性建議。細胞繼代時間介於 11 到 18 個小時之間，因此在 7 到 9 天內可得到  $0.5-4.0 \times 10^8$  個 cells/ml。最佳培養溫度為 30°C 至 37°C。

## Available BSK-H Media

Cat. No	Description	Size
1-10S02-H	BSK-H Medium with L-Glutamine	100 ml
1-10S02-I	BSK-H Medium with L-Glutamine	500 ml
1-10S03-I	BSK-H Medium without L-Glutamine	500 ml

## Stem Cell Media and Supplements

### Human Mesenchymal Stem Cell (hMSC) proliferation medium

Media for culturing hMSC delivered as a basal medium with supplements.

Cat. No	Modification	Size
11-01F03-I	hMSC proliferation medium, basal	500 ml
11-01F04-KIT	hMSC proliferation medium FCS kit	Kit
11-01F05-KIT	hMSC proliferation medium FCS supplement kit	Kit

### Human Mesenchymal Stem Cell (hMSC) chondrogenesis induction medium

The hMSC chondrogenesis induction medium induces chondrogenic differentiation of hMSCs. The medium is delivered as a basal medium with supplements.

Cat. No	Modification	Size
11-01F08-I	hMSC chondrogenesis induction medium basal, serum free	500 ml
11-01F09-KIT	hMSC chondrogenesis induction kit, serum free	Kit

### Human Mesenchymal Stem Cell (hMSC) osteogenesis induction medium

The hMSC osteogenesis induction medium induces osteogenic differentiation of hMSCs. The medium is delivered as a basal medium with supplements.

Cat. No	Modification	Size
11-01F10-I	hMSC osteogenesis induction medium, basal	500 ml
11-01F11-KIT	hMSC osteogenesis induction medium FCS kit	Kit
11-01F12-KIT	hMSC osteogenesis induction medium FCS supplement kit	Kit

### Human Mesenchymal Stem Cell (hMSC) adipogenesis induction medium

The hMSC adipogenesis induction medium induces adipogenesis differentiation of hMSCs. The medium is delivered as a basal medium with supplements.

Cat. No	Modification	Size
11-01F06-I	hMSC adipogenesis induction medium, basal	500 ml
11-01F07-KIT	hMSC adipogenesis induction medium FCS supplement kit	Kit

### Cancer Stem Cell Medium

Media for culturing human cancer stem cells delivered as a basal medium with supplements.

Cat. No	Modification	Size
11-01F01-I	Cancer stem cell medium, basal, serum free	500 ml
11-01F02-KIT	Cancer stem cell medium kit, serum free	Kit

All stem cell media formulations are optimized for initial seeding of 6000 cells/cm<sup>2</sup> up to a confluence of approximately 90%. Feeder-layer, matrix substrates or other substances are not necessary. Due to the possibility of reduced proliferative activity, we recommend the use of antibiotic supplement for freshly isolated cells only.



## BIT 9500 Serum Substitute

該產品是專為無血清條件、配方培養基成分開發。以 Iscove's IMDM 培養液為基礎，產品內容中包含牛血清白蛋白 (BSA)、重組人類胰島素 (Insulin) 和轉鐵蛋白 (Transferrin)。

### 操作製備須知：

- 使用 BIT 9500 的最終濃度為 20%。
- 存放在  $-20^{\circ}\text{C}$ 。
- pH 設置為 7.1–7.5，滲透壓濃度為  $300 \pm 20$  mOsm / kg。
- 在室溫 ( $15-20^{\circ}\text{C}$ ) 下解凍，或選擇在  $2-8^{\circ}\text{C}$  下解凍 (Overnight)。充分均勻混合後，即可儲存於  $2-8^{\circ}\text{C}$  長達 1 個月;或者分裝並儲存在  $-20^{\circ}\text{C}$ 。解凍後，請立即使用完畢，不建議重新冷凍。
- 該試劑內含物，包含 "牛血清白蛋白"、"人類重組胰島素"、"人類轉鐵蛋白 (iron-saturated)"、"Iscove's IMDM"。
- 不適用於任何人或動物的診斷或治療用途。

Cat. No	Description	Size
5-18S02-H	BIT 9500 Serum Substitute	100 ml



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