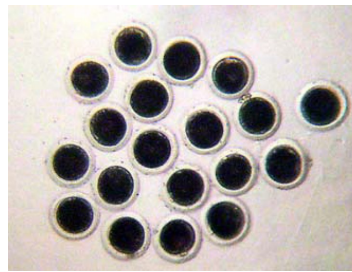
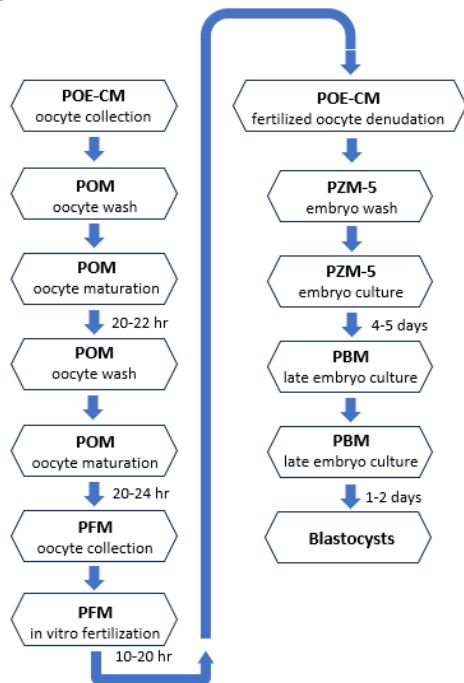




# Chemically Defined Media for PORCINE Reproductive Engineering

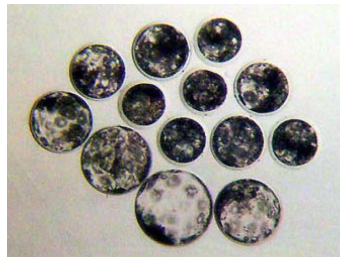


Defined culture media system for in vitro production of porcine embryos using a SINGLE BASIC MEDIUM



denuded embryos

high quality blastocysts



Porcine IVF media developed largely at the Japan Center for Animal Health (Tsukuba) and the Institute for Functional Peptides (IFP, Yama Japan). Find protocols for blastula production by IVF and enhanced/hatched blastula on the “Basic” and “Complete” Embryo Production Kit datasheets. Cosmo Bio sells and supports these IFP products under our “CSR” brand reagent program.

**Publications Describing IVF Media Development**  
 Mito et al., Methods Mol Biol 2019; PMID:31230275  
 Mito et al., Theriogenology 2015; PMID: 26255223  
 Mito et al., Theriogenology 2009; PMID: 19632712  
 Mito et al., Mol Reprod Dev 2013 PMID: 23661505  
 Mito et al., Reprod Fertil Dev. 2012 PMID: 22401276  
 Yoshioka et al., J Reprod Dev 2008 PMID: 18408352  
 Suzuki et al., Zygote 2007; PMID: 17967211  
 Suzuki et al., Reprod Fertil Dev 2006 PMID: 17032588  
 Yoshioka et al., Biol Reprod 2003 PMID: 12930720  
 Yoshioka et al., Biol Reprod 2002 PMID: 11751272

## Culture Kits for producing pig in vitro fertilized eggs



### BASIC Culture Kit For Porcine Embryos in vitro

- \* oocyte/embryo collection medium (POE-CM);
- \* basic medium for oocyte maturation (POM);
- \* fertilization medium (PFM);
- \* defined medium for embryos (PZM-5);
- \* 100x dbcAMP (dbcAMP-100X);
- \* Replate culture dishes.

Cat. No. [CSR-CK029](#),  
(IFP100PEP-BK)

This kit can efficiently produce transferable embryos (blastocysts) under low oxygen conditions (5% O<sub>2</sub> /5% CO<sub>2</sub> /90% N<sub>2</sub>, 39° C) without cumulus/granulose cell co-culture.



### COMPLETE Culture Kit For Porcine Embryos in vitro

- \* oocyte/embryo collection medium (POE-CM);
- \* basic medium for oocyte maturation (POM);
- \* fertilization medium (PFM);
- \* defined medium for embryos (PZM-5);
- \* late embryo collection media (PBM)
- \* 100x dbcAMP (dbcAMP-100X);
- \* Replate culture dishes.

Cat. No. [CSR-CK030](#),  
(IFP100PEP-CK)

The COMPLETE kit enhances the BASIC kit with PBM medium which can increase the number of blastocysts and hatched blastocysts obtained.

## Individual Components



### POE-CM (oocyte/embryo collection medium)

Synthetic medium for collecting and washing eggs and embryos. Includes polyvinyl alcohol, HEPES, bicarbonate and phenol red. Stable pH even at 37 °C and atmospheric pressure. see: Yoshioka et al. (2008)

Cat. No. [CSR-CK020](#),  
(IFP1040P)



### HP-POM (high performance oocyte maturation basic medium)

Serum-free basic medium (POM) supplemented with TGF-α. Oocyte maturation rates are similar to POM but blastocyst development rate post IVF has been reported to be increased (Mito et al.) see: Yoshioka et al. (2008)

Cat. No. [CSR-CK022](#),  
(IFP1011P)



### POM (oocyte maturation basic medium)

Synthetic POM medium with polyvinyl alcohol. For oocyte maturation. For oocyte maturation culture, supplement with 10 IU/ml eCG + 10 IU/ml hCG. Porcine follicular fluid not required. see: Yoshioka et al. (2008)

Cat. No. [CSR-CK021](#),  
(IFP1010P)



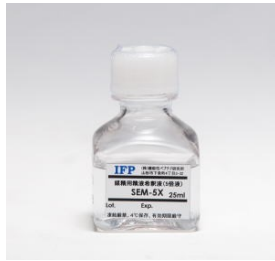
### 100x dbcAMP (dibutyryl cAMP)

Add to POM or HP-POM for normal ovum maturation. Sterile concentrate.

Cat. No. [CSR-CK027](#),  
(IFP1060P)



## Individual Components (continued)



Cat. No. [CSR-CK026](#),  
(IFP1050P)

### **SEM-5X** (semen dilution for insemination)

Sterile diluent used for sperm washing and preparation of isotonic Percoll solution for enrichment of viable sperm thawed sperm.



Cat. No. [CSR-CK023](#),  
(IFP1020)

### **PFM** (porcine fertilization medium)

Completely synthetic media optimized for IVF, based on PGMtac4 (Yoshioka 2008). PBM effectively promotes IVF in hypoxic culture (5% O<sub>2</sub>/5% CO<sub>2</sub>/90% N<sub>2</sub>, 39° C). see: Yoshioka et al. (2008)



Cat. No. [CSR-CK020](#),  
(IFP0410)

### **PZM-5** (porcine embryo development medium)

Completely synthetic IVF embryo development medium. Improves on PZM-4. Use to culture In vitro fertilized and collected in vivo fertilized embryos. PZM-5 supports naked fertilized embryo culture without special medium. Supports efficient production of blastocysts under hypoxic culture conditions (5% O<sub>2</sub>/5% CO<sub>2</sub>/90% N<sub>2</sub>, 39° C). see: Yoshioka et al. (2008)



Cat. No. [CSR-CK025](#),  
(IFP1030)

### **PBM** Porcine blastocyst/late Embryo Culture Medium

Increases blastocyst formation rate. PBM adds glucose and glycine to the PZM-5 embryo development medium. Following IVF and embryo culture (4-5 days) in PZM-5, PBM appears effective to improve the potential of morulae or blastocysts to develop into good quality hatching and hatched blastocysts. see: Yoshioka et al. (2008)



Cat. No. [CSR-CK028](#),  
(IFP9670)

### **Reproplate** (collagen-free 6-well plate)

Optimally shaped for stereoscopic observation and supports high rates of ova maturation, IVF, and embryo culture. Save on media, semen and mineral oil. Also ideal for in vitro maturation of a small number of eggs. Also useful for removing cryoprotectants in vitrification process and indirect freezing method.

Koutaiga wovs wittle piggies!



## Ordering Information

Catalog Number	Product Name	Size
CSR-CK020	<b>POE-CM</b> - Porcine Oocyte/Embryo Collection Medium	5 x 100 ml
CSR-CK021	<b>POM</b> - Basic Medium for Porcine Oocyte Maturation	3 x 25 ml
CSR-CK022	<b>HP-POM</b> - High performance Basic Medium for Porcine Oocyte Maturation	3 x 25 ml
CSR-CK023	<b>PFM</b> - Porcine Fertilization Medium	2 x 100 ml
CSR-CK024	<b>PZM-5</b> - Defined Medium for Porcine Embryos	3 x 25 ml
CSR-CK025	<b>PBM</b> - Defined Medium for Late Stage Porcine Embryos	2 x 25 ml
CSR-CK026	<b>SEM-5X</b> - Sperm Diluent for In Vitro Fertilization	25 ml
CSR-CK028	<b>Reproplate</b>	10 x 10 plates
CSR-CK027	<b>dbcAMP Concentrate 100X Solution</b>	500 uL
CSR-CK029	<b>BASIC Culture Kit for Porcine Embryos in vitro</b>	1 kit
CSR-CK030	<b>COMPLETE Culture Kit for Porcine Embryos in vitro</b>	1 kit



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