# Porcine Expanded Potential Stem Cell (pEPSC) culture Medium

港能生物科技
GNG BIOTECH

**For the maintenance of pEPSCs**
**Ref #P000001 500mL**

## Product Description

Porcine EPSC medium (pEPSCM) is a serum-free culture medium and is used for daily maintenance of pig EPSC cell lines. Porcine EPSC medium is an optimized and robust porcine EPSC culture system and its use in deriving pEPSC lines from preimplantation embryos (*in vivo* fertilized, *in vitro* fertilized (IVF), Parthenogenetic embryos and somatic cell nuclear transfer (SCNT)-derived embryos) and reprogrammed somatic cells. pEPSCM should be prepared sterilely and freshly. The preparation process should be carried out in Class II Biosafety Cabinet with proper personal protective equipment.

## Product Information

| COMPONENT NAME | COMPONENT # | SIZE | STORAGE | SHELF LIFE |
|---|---|---|---|---|
| Porcine Expanded Potential Stem Cell (pEPSC) culture Medium | P000001 | 500 mL | Long term store at -20 °C or -80°C. Routine store at 2 - 8°C. | Stable for 12 months from date of manufacture (MFG) on label. |

Please refer to the Safety Data Sheet (SDS) for hazard information.

## Preparation of Porcine Expanded Potential Stem Cell (pEPSC) culture Medium

The following example is for preparing 500 mL of complete medium. If preparing other volumes, adjust accordingly.

1. Gather all the components together and put them in Biosafety Cabinet after swiping with 70% ethanol.
2. Thaw pEPSCM at room temperature (15 - 25°C) or overnight at 2 - 8°C. Do not thaw in a 37°C water bath. Mix thoroughly.
3. Once thawed, Divide into ~40 ml aliquots (X12 tubes for 500 ml medium) and store at -20°C /-80°C for up to 6 months. Avoid freeze-thaw cycles.
4. If prepared aseptically, the thawed pEPSC medium is ready to use, without any supplement.
5. Porcine Expanded Potential Stem Cell (pEPSC) culture Medium is sterilized and mycoplasma-free.

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## Directions for Use

1. **Thawing the Medium** - If stored frozen, thaw the medium at 2-8°C to prevent degradation of sensitive components. Avoid using a microwave or hot water bath for thawing.
2. **Preparation of Work Area** - Before using the medium, ensure that the work area is sterile. Clean and disinfect the biosafety cabinet where the medium will be handled.
3. **Equilibration** - Equilibrate the medium to room temperature before adding it to the cell culture to avoid thermal shock to the cells.
4. **Medium Change** - Perform regular medium changes according to your specific cell line and culture conditions. Typically, hEPSC medium should be changed every 1-2 days.

## Reference

Gao, X. et al. Establishment of porcine and human expanded potential stem cells. Nat Cell Biol 21, 687-699, doi:10.1038/s41556-019-0333-2 (2019).

Ruan, D. *et al.* An optimized culture system for efficient derivation of porcine expanded potential stem cells from preimplantation embryos and by reprogramming somatic cells. *Nature Protocols*, doi:10.1038/s41596-024-00958-4 (2024).

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- **Avoid repeated freeze-thaw cycles** of the medium as this can lead to degradation of critical components.

- **Always handle the medium using sterile techniques** to prevent contamination.

- **Dispose of old medium and waste materials** according to your institution's safety and waste disposal guidelines.

These directions are generalized for typical use and might need adjustments based on specific experimental setups or cell line requirements. Always refer to detailed protocols and guidelines specific to your cells and experiments.

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