

SAR IVC-W medium

Product Description

SAR IVC-washing medium (Catalog#: SAR IVC-W 01) is **Simple and Reliable (SAR)** medium for cumulus cell removal and zygote washing after fertilization *in vitro* (IVF), but before embryo culture *in vitro* (IVC). It is specifically designed for a **bovine *in vitro* fertilization (IVF)** process. A high blastocyst development rate is guaranteed. This medium is developed with Renova Life Inc. (RLI) standardized recipes that have been proven to be perfectly suitable for *in vitro* production of bovine embryos in several peer-reviewed publications. Years of our research and experience have been put into the development of this medium, offering you the best quality and performance for IVM/IVF/IVC. Specifically tested embryo-water and embryo-bovine serum albumin (BSA) are used in our RLI in-house SAR IVM/IVF/IVC products, which have been well tested for bovine IVF and embryo culture *in vitro* and for making IVF and OPU-IVF embryos for cryopreservation and embryo transfer practices.

RLI **SAR IVC-W medium** is a constant high quality product, ideal for embryo washing post IVF and production of embryos *in vitro*. It is prepared for commercial and research use. RLI **SAR IVC-W medium** has been prepackaged as follows: SAR IVC-W 01, 100 mL per bottle.

SAR IVC-W contains Medium 199 (M199) with Earle's salts, L-glutamine, sodium bicarbonate, and HEPES, supplemented with 10 % (v/v) fetal bovine serum and other small molecules and promoting factors that enhance embryo development *in vitro*.

SAR IVC-W is designed for removal of cumulus cells and washing zygotes to clean zygotes before IVC. More times of washing can avoid any contamination because sperm are very dirty. During 18 h incubation of sperm and oocytes in TALP IVF droplets, TALP IVF droplets usually are not clean, usually contain contaminants. It is recommended that zygote washing for 6-8 times after cumulus removal is necessary before transferring them into IVC droplets.

Storage temperature: 4°C. **Expiration date: 2 weeks after production date.**

Protocol for removing cumulus cells from oocyte after IVF, but before IVC

A. Making SAR IVC-W medium dishes

1. Mark the 35 mm Petri-dishes (Falcon 1008) with marker pen (IVC dish # and date).
2. Add 3 mL **SAR IVC-W** into 1008 Petri-dishes, make 7-9 **SAR IVC-W** dishes.
5. Place **SAR IVC-W** dishes in CO₂ incubator. The dishes should be balanced in the incubator 2-4 h prior to use.

B. Removing cumulus cells from zygotes after IVF and washing

1. After TALP IVF for 18 h, transfer fertilized cumulus oocyte complexes (COCs) into **SAR IVC-W** dishes.
2. Remove COCs by pipetting with glass pipets with suitable diameter (O.D. 160 µm). The diameter of an oocyte is varied from 160 to 180 µm. RLI has manufactured **Cumulus Remover** (cumulus cell removal/pipetting set) and glass pipets at O.D. 160 µm for commercial use. RLI **Cumulus Remover** apparatus can make cumulus removal much easy.



3. After stripping zygotes, transfer zygotes into new **SAR IVC-W** dish for completely remove of any cumulus cells.
4. Wash zygotes 6-8 times in new/fresh **SAR IVC-W** droplets/medium prior to putting into SAR-IVC culture droplets.
5. Wash presumptive zygotes in **SAR IVC** medium one time, then transfer them into **SAR IVC** droplets for embryo culture *in vitro*.

References

1. Senatore E, Xu J, Novoa M, Gong G, Lin T, Bella A, Moreno JF, Mannino M, Tian CX, Presicce GA, Wu S, and Du F* Improved in vitro development of OPU-derived bovine (*Bos taurus*) embryos by group culture with agarose-embedded helper embryos. ***Theriogenology***, 2010; 74(9):1643-1651.
2. Xu J, Guo Z, Su L, Nedambale TL, Zhang J, Schenk J, Moreno JF, Dinnyes A, Ji W, Tian XC, Yang X and Du F* Developmental potential of vitrified Holstein cattle embryos fertilized in vitro with sex-sorted sperm. ***Journal of Dairy Science*** 2006; 89:2510–2518.
3. Sung LY, Du F*, Xu J, Chang W, Nedambale TL, Jiang S, Tian XC, and Yang X The differential requirement of albumin and sodium citrate on the development of in vitro produced bovine embryos. ***Reproduction Nutrition and Development*** 2004; 44:551-564.

Ordering Information

Cat # SAR IVC-W 01 100 mL/bottle, \$55.00 plus S&H

Other packaging and bulk ordering is available upon request.