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Product Information

Rat Sertoli Cells (RSC)

Catalog Number	10RA-038	Cell Number	1.0 million cells/vial
Species	*Rattus norvegicus*	Storage Temperature	Liquid nitrogen

Product Description

Sertoli cells are highly specialized cells found in the testes. They played an important role in the development and maturation of sperm cells, or spermatozoa, within the testes, a process called spermatogenesis. Because Sertoli cells function largely to assist the developing sperm cells through their maturation process, they sometimes are referred to as a nurse cell of the testicles. They are part of a seminiferous tubule and helps in the process of spermatogenesis [1]. Sertoli cells provide immature models for a high potential of nursing purpose and supporting function for the maturity.

iXCells Biotechnologies provides high quality Rat Sertoli Cells (RSC), which are isolated from the testes of male rats aged 19-21 days and cryopreserved at P0, with >1 million cells in each vial. RSC express Vimentin and they are negative for mycoplasma, bacteria, yeast, and fungi. RSCs can be maintained in Sertoli Cell Growth Medium (Cat# MD-0091) under the condition suggested by iXCells Biotechnologies. It is not recommended to passage the RSC because the cells will lose their identity.

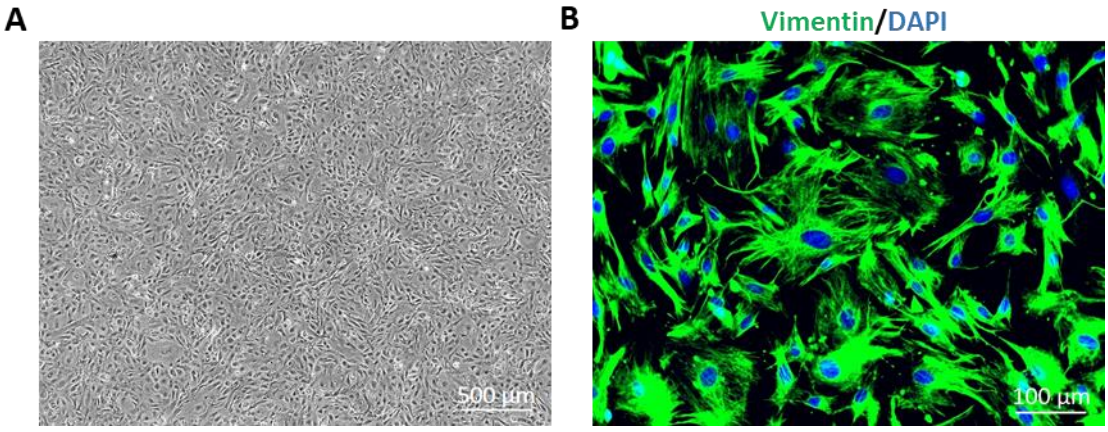

Figure legend: (A) Phase contrast image of Rat Sertoli Cells (RSC) taken at 7 days post recovery. **(B)** RSC are positive for Vimentin as shown by immunofluorescence staining.

Product Details

Tissue	Rat testis
Package Size	1.0 million cells/vial
Passage Number	P0
Shipped	Cryopreserved
Storage	Liquid nitrogen
Growth Properties	Adherent
Media	Sertoli Cell Growth Medium (Cat# MD-0091)

Protocols

Thawing of Frozen Cells

1. Upon receipt of the frozen Rat Sertoli Cells (RSC), immediately place into liquid nitrogen storage or thaw the cells and initiate the culture immediately in order to retain the highest cell viability.
2. To thaw the cells, put the vial in 37°C water bath with gentle agitation for 1-2 minutes until the contents completely thaw. Keep the cap out of water to minimize the risk of contamination.
3. Carefully transfer the cells into a 15 mL conical tube with ~5 mL fresh **Sertoli Cell Growth Medium**. Gently re-suspend and dispense the contents.
4. Centrifuge at 300 g for 5 minutes.
5. Remove the supernatant and re-suspend the pellet with 1 mL Sertoli Cell Growth Medium.
6. Transfer the cell suspension into the lectin-coated plate. We recommend seeding 1 vial of cells into 2 wells of a 12-well plate or 1 well of a 6-well plate.
7. Return the culture plate to 37°C incubator (5% CO_2) for continuous culture.
8. For the best result, do not disturb the culture for at least 1 day after the culture has been initiated, and do not change the medium until day 4.

Safety Precaution: *it is highly recommended that protective gloves and clothing should be used when handling frozen vials.*

Standard Culture Procedure

1. Rat Sertoli Cells (RSC) could be maintained in the **Sertoli Cell Growth Medium** for 7-10 days. It is normal to see

non-attached or dead cells dominant in the culture within the first two days. RSC will grow and become noticeable 48-72 hours after seeding. Please do not change medium until day 4.

2. Replace the medium on day 4 and then change medium every 3-4 days.
3. By day 7-10 days, RSC show uniform population and are ready for the desired experiment.

Note: *It is not recommended to passage the RSC because the cells will lose their identity.*

References

[1] Chui K, Trivedi A, Cheng C, Cherbavaz, Dazin P, Huynh A, Mitchell J, Rabinovich G, Noble-Haeusslein L, John C. (2011) "Characterization and functionality of proliferative human Sertoli cells." Cell Transplant. 20(5): 619-635.

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[3] Tarulli G, Stanton P, Meachem S. (2012) "Is the adult Sertoli cell terminally differentiated" Biol Reprod. 87(1): 1-11.

[3] Burgess, M. L., Terracio, L, Hirozane, T., Borg, T. K. (2002) “Differential integrin expression by cardiac fibroblasts from hypertensive and exercise-trained rat hearts. Cardiovasc Pathol 11(2):78-87.

Disclaimers