Product sheet

GC-2spd(ts) | 300376

General information

Description	GC-2spd(ts) Cells: Advanced Tools for Reproductive Physiology Research Discover the remarkable GC-2spd(ts) cells, a valuable resource in reproductive physiology research. Derived from the spermatocytes of a 6-week-old male Mus musculus (mouse), these cells offer a range of applications, particularly in the realm of 3D cell culture. GC-2spd(ts) cells belong to the animal cell category and are classified under Eukaryota, Animalia, Metazoa, Chordata, Vertebrata, and Tetrapod, highlighting their evolutionary position within the animal kingdom. Regarding cell type, GC-2spd(ts) cells expressly represent spermatocytes, vital players in the male reproductive system. Their unique epithelial morphology adds to their significance in research applications, enabling researchers to explore various aspects of reproductive physiology in a controlled laboratory environment. One of the critical advantages of GC-2spd(ts) cells is their suitability for 3D cell culture. This cutting-edge technology provides a more accurate representation of cellular behaviour in a three-dimensional context. By mimicking the natural environment, this approach allows for more comprehensive investigations into the intricate workings of spermatocytes, unlocking new insights into their biology. When utilizing GC-2spd(ts) cells, researchers can delve into a broad spectrum of reproductive physiology studies. Whether investigating the mechanisms of spermatogenesis, exploring the impact of environmental factors on male fertility, or examining the efficacy of potential therapeutic interventions, these cells serve as a robust foundation for scientific exploration. GC-2spd(ts) cells offer a promising avenue for reproductive physiology research, providing researchers with a particular and well-characterized model system to investigate the complexities of spermatocytes. Their epithelial morphology, combined with their classification under the animal cell category, positions them as a valuable tool in understanding the intricate world of male reproductive biology. With their applications in 3D cell culture, GC-2spd(ts) cells open new avenues for transformative scientific discoveries in reproductive physiology.
Organism	Mouse
Tissue	Testis
Applications	3D cell culture
Synonyms	GC-2

Characteristics

Age	6 weeks
Gender	Male
Morphology	Epithelial
Cell type	Spermatocyte
Growth properties	Adherent

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Identifiers / Biosafety / Citation

Citation	GC-2spd(ts) (Cytion catalog number 300376)
Biosafety level	2

Expression / Mutation

Viruses	Transformant: Simian virus 40 (SV40) T antigen

Handling

Culture Medium	DMEM
Medium supplements	10% FBS, w: 4.5 g/L Glucose, w: 4 mM L-Glutamine, w: 1.5 g/L NaHCO3, w: 1.0 mM Sodium pyruvate
Passaging solution	Accutase
Freeze medium	CM-1 (Cytion catalog number 800100) or CM-ACF (Cytion catalog number 806100)
Handling of cryopreserved cultures	The cells come deep-frozen shipped on dry ice. Please make sure that the vial is still frozen. If immediate culturing is not intended, the cryovial must be stored below -150 degree Celsius after arrival. If immediate culturing is intended, please follow the below instructions: Quickly thaw by rapid agitation in a 37 degree Celsius water bath within 40-60 seconds. The water bath should have clean water containing an antimicrobial agent. As soon as the sample has thawed, remove the cryovial from the water bath. A small ice clump should still remain and the vial should still be cold. From now on, all operations should be carried out under aseptic conditions. Transfer the cryovial to a sterile flow cabinet and wipe with 70% alcohol. Carefully open the vial and transfer the cell suspension into a 15 ml centrifuge tube containing 8 ml of culture medium (room temperature). Resuspend the cells carefully. Centrifuge at 300 x g for 3 min and discard the supernatant. The centrifugation step may be omitted, but in this case the remains of the freeze medium have to be removed 24 hours later. Resuspend the cells carefully in 10 ml fresh cell culture medium and transfer them into two T25 cell culture flasks. All further steps are described in the subculture section.
Handling of proliferating cultures	One or two cell culture flasks come filled with cell culture medium. Collect the entire medium in 1 or 2 x 50 ml centrifuge tubes, respectively. Carefully add 5 ml of cell culture medium to each T25 cell culture flask. Control the cell morphology and confluency under the microscope. Incubate at 37 degree Celsius for a minimum of 24 hours. Spin down the collected medium at 300 x g for 3 minutes to collect the cells which may have detached during transit. If a cell pellet is visible, resuspend the cells in 5 ml of cell culture medium and transfer to a T25 cell culture flask. Incubate at 37 degree Celsius for a minimum of 24 hours.

Quality control / Genetic profile / HLA

Sterility	Mycoplasma contaminations are ruled out through PCR-based and luminescence-based mycoplasma assays. The absence of bacterial, fungal or yeast contamination is controlled through daily visual cell monitoring.