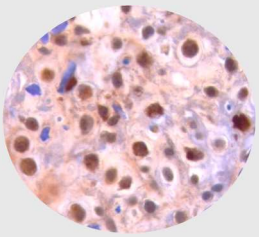

Human Primary Chondrocytes P0

Catalog Reference: ACSBC_HC_P0

Company Description

ACS Biotech is committed to providing high quality osteoarticular samples for R&D programs focused on osteoarticular pathologies.

With a strong expertise in collection, preservation and quality controls in osteoarticular samples, ACS Biotech can propose **cells** like chondrocytes, fibrochondrocytes, osteoblasts, synoviocytes as well as osteoarticular **tissues** like cartilage, meniscus, synovial membrane, bone, or osteoarticular **fluids** and cell growth **medium**. Osteoarticular samples are collected from **living** donors and can be provided from **the same patient**. All samples are **for R&D use.**

The donation, procurement, and testing carried out on biological samples from human origin comply with European directives. The protection of individuals with regards to the processing of personal data and on the free movement of this data complies with the European Regulation (GDPR).

Product Information

Product Description: ACS Biotech is committed to providing Human Primary Chondrocytes fully controlled in terms of identity, purity, functionality and safety. Human Primary Chondrocytes are available cryopreserved at P0 (passage zero) in cryovials containing 1.000.000 or 2. 000.000 viable cells after thawing. Human Primary Chondrocytes are isolated from normal human articular cartilage. They are collected from living donors.

Source: Knee / Hip

Country of Manufacture: **France**

Format: Cryopreserved

Quantity: > 1. 000.000 - 2.000.000 cryopreserved cells/vial *(as needed)*

Passage: **P0**

Biosafety:

All samples are tested negative for mycoplasma, yeast, fungi.
Donors are tested negative for HIV-1, HIV-2, HBV, HCV, Syphilis BW and HTLV (if needed)

Quality Control (QC):

All the quality controls are carried out to ensure compliance with the expected requirements: appearance, number of cells, viability, morphology, phenotype, cell purity & sterility.

- Cell morphology
- Cell Viability > **85%***
- Validated Phenotype by q-PCR : ACAN, **Col II > Col I**

**before cryopreservation*

Doubling Times: 3,7 days

Recommended Storage Conditions: Upon receipt, place immediately cryopreserved cells from dry ice to liquid nitrogen (-196°C). Avoid repeated freeze/thaw cycles until use.

Shipping Conditions: Dry ice

Intended Use: Human Primary Chondrocytes are **for in vitro** research **use only**. Not approved for diagnostic or therapeutic purposes.

Warning: Although the serology of donors is negative for HIV, HCV, HBV, HTLV, BW, tests cannot offer complete insurance. The cells should be handled as potentially infectious and must be handled at biological safety level 2 to minimize potential exposure.

Research Area Applications: Regenerative Medicine / Tissue- engineering products / Organ on chips / 3D Bioprinting / Research on Osteoarticular pathologies / Efficacy & Toxicity / Drug delivery / Drug screening / Biomaterials

Recommended Medium for chondrocyte culture: ACSBC_MD_500ml

More Documentation:

- CoA
- SDS
- Technical sheets (available on demand):
    - Proliferation study of chondrocytes in 2D culture

Contact : *information@acsbiotech.com*

Recommended Protocol for Thawing Human Primary chondrocytes

Note: Straight upon arrival, place the cryopreserved cells in liquid nitrogen or seed them immediately.

Principle

This procedure describes the recommendations for thawing Human Primary chondrocytes.

Thawing must be rapid to best preserve the cells and to avoid the cytotoxic effects of DMSO at room temperature. As soon as the cryotubes have left the liquid nitrogen tank, put the cells in the warm medium as rapidly as possible. Thawing should be done quickly but with gentle movements, without sudden pipetting that could damage cell viability.

Thawing protocol

1. Heat the culture medium at 37°C
2. In a microbiological safety environment (PSM II), prepare a 50mL conical centrifuge tube with 10mL of previously heated medium supplemented (with 10% Fetal Bovine serum (FBS), Human Platelet Lysate, or any other suitable substitute if needed).
3. Remove the cryotubes from the liquid nitrogen tank, respecting the safety and location rules.
4. Place the cryotubes in a polystyrene container to avoid heating the cryotubes with the hand during the time to attain the PSM II in the lab.
5. Place the cryotubes at 37°C. Shake gently by hand during thawing. When there is only one ice cube left in the tube, transfer the cryotube contents directly into the 50mL conical centrifuge tube containing the medium supplemented at 37°C.
6. Centrifuge for 5 min at 210×g
7. Resuspend the cells in 10 mL of prewarmed to 37°C appropriate cell growth medium like *Cell growth medium ACS Biotech (ACSBC_MD_500ml).*
8. Count the cells and measure the viability

Recommended Protocol for Seeding Human Primary chondrocytes

Principle

This procedure describes the recommendations to seed chondrocytes for cell culture.

Caution

All the process is carried out under the PSM II which must be cleaned before and after each use in accordance with protocol. All equipment entering the PSM is pre-disinfected.

Seeding protocol

1. The growth medium used is the ready-to-use "*Cell growth medium ACS Biotech*" *(ACSBC_MD_500ml)* : it contains Fetal Bovine Serum (or any other suitable substitute if needed) and all growth factors required for cell proliferation.
2. Heat the Cell growth medium at 37°C
3. Dilute the chondrocytes in the Cell growth medium to obtain a seeding density of 15 000 chondrocytes /cm² (for cell culture flask) to 40 000 chondrocytes /cm² (for multi-well culture plate)
4. Open the cell culture vessel (culture flask or multi-well culture plate)
5. Seed the cells in the culture vessel
6. Place the culture vessel in the incubator at 37°C with 5% CO2.
7. Wait at least 2 days before the first replacement with the cell growth medium *(ACSBC_MD_500ml)*. It will be replaced 3 times a week

Recommended Protocol for Human Primary chondrocytes Passage

Principle

This procedure describes the recommendations for passage of Human Primary chondrocytes.

Caution

All the process is carried out under the PSM II which must be cleaned before and after each use in accordance with protocol. All equipment entering the PSM is pre-disinfected.

Cell Passage protocol

Suggested Cell Passage Procedure: Cells should be 80-90% confluent before cell passage is carried out.

1. Remove the Cell growth medium *(ACSBC_MD_500ml)* and wash the cells with D-PBS 1-2 times (1-10 ml according to the culture vessel).
2. Add Trypsin/EDTA at 37 °C (1-5 ml according to the culture vessel), then observe the cells with the numeric microscope.
3. When the cells appear rounded or retracted, gently tap the culture plate to detach the cells. Neutralize the trypsin with addition of the culture medium (1-5 ml) supplemented with 10% FBS (or a Trypsin Neutralization Solution).).
4. Transfer the detached cells to a sterile centrifuge tube.
5. Centrifuge for 5 min at 210xg.
6. Add fresh Cell growth medium *(ACSBC_MD_500ml) at 37°C* to resuspend the cells. Carefully pipette to obtain a single cell suspension.
7. Count the cells and measure the viability. Dilute the chondrocytes in the Cell growth medium *at 37°C* to obtain the seeding cell density (*ACSBC_MD_500ml)*.
8. Seed the cells in the new culture vessel according to the *Recommended Protocol for Seeding Human Primary chondrocytes.*