CCD-18Co

CRL-1459™

Description

CCD-18Co is an adherent cell line isolated from the colon tissue of a healthy donor. This line is non-malignant and can be used as a normal control in gastrointestinal (GI), cancer, and drug research. It is also used for investigation of fibroblast functions and wound healing studies.

Organism: *Homo sapiens*, human
Cell Type: colonocyte
Tissue: Colon
Age: 2.5 months
Gender: Female
Morphology: fibroblast
Growth properties: Adherent
Disease: Normal
Technical information: ATCC Product Experience does not have technical information on patent deposits that are not produced or characterized by ATCC. Additional information can be found in the corresponding patent available from the patent holder or with the U.S. and/or international patent office.

Storage Conditions

Product format: Frozen
Storage conditions: Vapor phase of liquid nitrogen

Intended Use

This product is intended for laboratory research use only. It is not intended for any animal or human therapeutic use, any human or animal consumption, or any diagnostic use.

BSL 1

ATCC determines the biosafety level of a material based on our risk assessment as guided by the current edition of *Biosafety in Microbiological and Biomedical Laboratories (BMBL)*, U.S. Department of Health and Human Services. It is your responsibility to understand the hazards associated with the material per your organization's policies and procedures as well as any other applicable regulations as enforced by your local or national agencies.

ATCC highly recommends that appropriate personal protective equipment is always used when handling vials. For cultures that require storage in liquid nitrogen, it is important to note that some vials may leak when submersed in liquid nitrogen and will slowly fill with liquid nitrogen. Upon thawing, the conversion of the liquid nitrogen back to its gas phase may result in the vial exploding or blowing off its cap with dangerous force creating flying debris. Unless necessary, ATCC recommends that these cultures be stored in the vapor phase of liquid nitrogen rather than submersed in liquid nitrogen.

Certificate of Analysis

For batch-specific test results, refer to the applicable certificate of analysis that can be found at www.atcc.org.

Growth Conditions

Temperature: 37°C

Handling Procedures

Unpacking and storage instructions:

1. Check all containers for leakage or breakage.
2. Remove the frozen cells from the dry ice packaging and immediately place the cells at a temperature below -130°C, preferably in liquid nitrogen vapor, until ready for use.

Complete medium:

The base medium for this cell line is ATCC-formulated Eagle's Minimum Essential Medium, Catalog No. 30-2003. To make the complete growth medium, add the following components to the base medium: fetal bovine serum to a final concentration of 10%.

Example media preparation:

- 500 mL EMEM (ATCC 30-2007)
- 56 mL FBS non-heat-inactivated (ATCC 30-2020)

Handling Procedure:

To insure the highest level of viability, thaw the vial and initiate the culture as soon as possible upon receipt. If upon arrival, continued storage of the frozen culture is necessary, it should be stored in liquid nitrogen vapor phase and not at -70°C. Storage at -70°C will result in loss of viability.

1. Thaw the vial by gentle agitation in a 37°C water bath. To reduce the possibility of contamination, keep the O-ring and cap out of the water. Thawing should be rapid (approximately 2 minutes).
2. Remove the vial from the water bath as soon as the contents are thawed, and decontaminate by dipping in or spraying with 70% ethanol. All of the operations from this point on should be carried out under strict aseptic conditions.
3. Transfer the vial contents to a centrifuge tube containing 9.0 mL complete growth medium and spin at approximately 150 to 400 x *g* for 8 to 12 minutes (200 x *g* for 8 minutes).
4. Resuspend cell pellet with the recommended complete growth medium (see the lot information on **Certificate of Analysis** (COA) for the culture recommended dilution ratio) and dispense into a 25 cm^2 or a 75 cm^2 culture flask as recommended on the COA. The recommended seeding density for CRL-1459 is 1.0 x 10^4 to 4.0 x 10^4 viable cells/cm^2. It is important to avoid excessive alkalinity of the medium during recovery of the cells. It is suggested that, prior

to the addition of the vial contents, the culture vessel containing the complete growth medium be placed into the incubator for at least 15 minutes to allow the medium to reach its normal pH (7.0 to 7.6).

5. Incubate the culture at **37°C** in a suitable incubator. A 5% CO_2 in air atmosphere is recommended if using the medium described on this product sheet.

Subculturing procedure:
Remove medium, and rinse with 0.25% trypsin, 0.053 mM EDTA solution (ATCC 30-2101). Remove the solution and add an additional 1 to 2 mL of trypsin-EDTA solution (adjust volume to size of flask). Allow the flask to sit at room temperature (or at 37°C) until the cells detach. Add fresh culture medium, aspirate and dispense into new culture flasks.

Comments: This cell line has a finite life span and when the cells start to senesce, the cells have a different morphology (larger and vacuolar). The ATCC did a long-term growth study and found that these cells senesce at PDL 42. Recommend checking the Certificate of Analysis of the lot received for PDL of cells of the current lot. The cells do look different before 100% confluence. When they are sparse the cells are flat and large and irregular; at confluence they are more compact, smaller appear uniform.

Subcultivation Ratio/Subculture seeding density: A subcultivation ratio of 1:2 to 1:3 is recommended or subculture at a seeding density of 8.0 x 10^3 to 4.0 x 10^4 viable cells/cm^2
Medium Renewal: Every 2 to 3 days
Note: Growth of the cells is enhanced by addition of tumor necrosis factor alpha (TNF alpha) to the medium.
Reagents for cryopreservation: Complete growth medium supplemented with 5% (v/v) DMSO (ATCC 4-X)

Material Citation

If use of this material results in a scientific publication, please cite the material in the following manner: CCD-18Co (ATCC CRL-1459)

References

References and other information relating to this material are available at www.atcc.org.

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Contact Information

ATCC
10801 University Boulevard
Manassas, VA 20110-2209
USA
US telephone: 800-638-6597
Worldwide telephone: +1-703-365-2700
Email: tech@atcc.org or contact your local distributor