

PRIME-XV Chondrogenic Differentiation XSFM

Catalog #	Product	Size
91138	PRIME-XV Chondrogenic Differentiation XSFM	100 mL liquid

Intended Use

PRIME-XV Chondrogenic Differentiation XSFM is intended for use in the chondrogenic differentiation of human mesenchymal stem cells (MSCs). This medium is ready to use and can be supplemented with additional cytokines/growth factors for desired applications.

Product Description

PRIME-XV Chondrogenic Differentiation XSFM is a xeno-free, serum-free complete medium optimized for the differentiation of human MSCs. This product does not contain antibiotics.

Quality Assurance

All quality control test results are reported on a lot specific Certificate of Analysis which is available at www.irvinesci.com or upon request.

Shipping

This product is shipped with dry ice. Upon receipt, store it immediately at the temperature recommended below.

Storage Instructions and Stability

Upon receipt, store the medium at or below -10°C in a manual defrost freezer. Unopened medium is stable for 24 months from date of manufacture, as indicated on label, when stored at or below -10°C in a manual defrost freezer. PRIME-XV Chondrogenic Differentiation XSFM can be aliquoted and stored at or below -10°C in a manual defrost freezer for up to 3 months. When ready to use, thaw this medium overnight at 2-8°C in the dark. PRIME-XV Chondrogenic Differentiation XSFM should be used within one week when stored at 2-8°C and protected from light. Not validated for use beyond the unopened expiry shelf life. Repeated freeze-thaw cycles should be avoided.

Precautions

For research use or further manufacturing use only. Not for injection or diagnostic procedures. This reagent should not be used beyond the expiration date. Results may vary due to variations among human MSCs derived from different donors.

This product contains components derived from human plasma, which has been tested and found negative for antibodies to HIV-1/2, hepatitis B surface antigen (HBsAg), and hepatitis C virus (HCV). However, the medium should be handled as if potentially infectious. Safe laboratory procedures should be followed and protective clothing should be worn when handling this medium. The acute and chronic effects of over-exposure to this medium are unknown.

Directions for Use

The following protocol is optimized for chondrogenic differentiation of human MSCs derived from adipose tissue in 15 mL conical culture tubes.

Chondrogenic Culture Protocol

1. Transfer 2.5×10^5 human MSCs to a 15 mL conical tube.
2. Centrifuge the cells at 200xg for 5 minutes at room temperature. Remove the medium and resuspend the cells with 0.5 mL of DMEM/F12 (PN# 9042) basal medium.
3. Centrifuge the cells at 200xg for 5 minutes. Aspirate and discard the medium.
4. Resuspend the cells in 0.5 mL of PRIME-XV Chondrogenic Differentiation XSFM and centrifuge the cells again at 200xg for 5 minutes at room temperature. Do not remove the medium.
5. Loosen the cap(s) of the tube(s) to allow gas exchange and incubate at 37°C and 5% CO₂.
6. Replace the medium with 0.5 mL of fresh PRIME-XV Chondrogenic Differentiation XSFM every 2-3 days.
7. Cells should compact into a chondrocyte spheroid within 1-3 days.
8. After 14-21 days, the chondrocyte spheroid can be fixed and prepared for staining.

Note: Use caution when replacing the medium to avoid aspirating the spheroid pellet.

Alcian Blue Stain Analysis

1. After 14-21 days under differentiation culture, aspirate media from the conical tube and rinse with PBS without calcium and magnesium (PN# 9240).
2. Fix cells with 4% formaldehyde solution for 30 minutes.
3. After fixation, rinse pellet with distilled water and stain cells with 10% Alcian Blue solution in ethanol and acetic acid. Add enough solution to completely cover the pellet, and incubate overnight at room temperature.
4. Aspirate Alcian Blue solution and wash with destaining solution.
5. Aspirate destaining solution and rinse with distilled water. Visualize cells under light microscope and capture images.

Sample Data

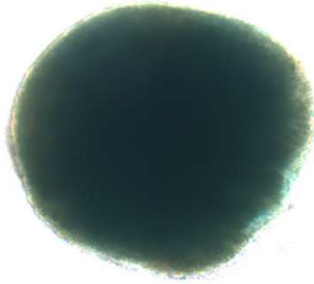


Figure 1. Human adipose-derived MSCs cultured in PRIME-XV Chondrogenic Differentiation XSFM. Alcian Blue staining shows compact spheroid with expression of cartilage extracellular matrix. Image taken at 10X magnification.

Related Products

Catalog #	Product	Size
91135	PRIME-XV MSC Expansion SFM	250 mL liquid
91149	PRIME-XV MSC Expansion XSFM	1 L, 250 mL liquid
91137	PRIME-XV Adipogenic Differentiation SFM	100 mL liquid

Technical Support

CONTACT US

For more information or assistance contact Customer Service at:

- Email: fisitmrequest@fujifilm.com
- Direct line: +1 800 577 6097

WEBSITE RESOURCES

Visit the website at www.irvinesci.com for technical resources and information including:

- Safety Data Sheets (SDS)
- Certificate of Analysis (CoA) (when available)
- FAQs
- Product literature
- Complete list of offices and contact information by country

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