AventaCell BioMedical Corp.

UltraGRO™ Cell Culture Supplement

Description

UltraGRO™ cell culture supplement is a non-xenogeneic, animal serum-free, and heparin-requiring supplement for replacing FBS (fetal bovine serum) to support cell expansion from research and clinical trials to commercial application. UltraGRO™-Advanced contains abundant growth factors and cytokines necessary for research or industrial cell growth and proliferation of multiple cell types (e.g. MSCs) in research-scale or industrial-scale production.

Product	Catalog No.	Spec.	Storage	Shelf Life*
UltraGRO™ (Research grade)	HPCPLCRL05	50mL	Store at -20°C	60 months
	HPCPLCRL10	100mL		
	HPCPLCRL50	500mL		
UltraGRO™ (GMP grade)	HPCPLCGL05	50mL		
	HPCPLCGL10	100mL		
	HPCPLCGL50	500mL		

*Shelf life duration is determined from Date of Manufacture, continuously stored frozen in original bottle.

Application

For human *ex-vivo* tissue and cell culture processing applications.

Important information

- Clotting or insoluble particles may form in thawed UltraGRO™. Published research has shown that particles will not alter the performance of the product.
- Clotting or insoluble particles may form in thawed UltraGRO™, it is recommended to centrifuge at 3,400 xg for 3~5 minutes or to filter the liquid concentrate with a sterile 40 µm Cell Strainer to reomve insoluble particles.
- Filtering the completed medium (e.g. 5%), after UltraGRO™ is diluted in the basal medium, will not affect UltraGRO™ supplemented cell culture performance. However, 0.22 µm filtering is NOT recommended for the 100% UltraGRO™ concentrate, as this may reduce 5% UltraGRO™ cell culture performance.
- Repeated freeze-thaw cycles should be avoided as they will cause an increase in insoluble percipitates and resulting potential decrease in UltraGRO™ performance.

Safety information

- Follow the handling instructions outlined in the Material Safety Date Sheets (MSDSs). Wear appropriate protective eyewear, clothing, and gloves.
- UltraGRO™ is a cell culture supplement collected from healthy donors at FDA or HC licensed centers. Each donor has been tested usiing FDA/HC licensed tests and found nonreactive for HBsAg, Hepatitis B core antibody (anti-HBc), HIV antibody (anti-HIV-1/2), Hepatitis C antibody (anti-HCV), HTLV-1/2 antibody (anti-HTLV-1/2), Trypanosoma cruzi antibody (anti-T. cruzi), HIV-1, HCV, HBV, WNV nucleic acid testing and Syphilis microhemagglutination test.
- This product is for *in vitro* use only.

Storage and shipping information

UltraGRO™ is most stable when stored forzen until needed. The recommended storage temperature is -20°C. Thaw frozen UltraGRO™ product in 37°C water bath before use. Once UltraGRO™ is thawed, it is recommended to fully use for completed medium preparation (e.g. 5%) the same day, or to divide it into single-use aliquots and store unused aliquots at -20°C.

MSC culture conditions

Media:

Complete medium is comprised of a basal media (e.g. α-MEM or other supportive media), heparin and UltraGRO™.

Culture type: Adhesion

Culture vessels: Cell culture plates, T-flasks, G-Rex flasks, Cell culture bags, Spinner flask or Vertical wheel bioreactor

Temperature range: 36°C to 38°C

Incubator atmosphere: Humidified atmosphere of 4~6% CO_2. Ensure that proper gas exchange is achieved in culture vessels.

Instructioins for use

- UltraGRO™ shows optimal growth of MSC at 5% (v/v) in typical cell culture media, i.e. α-MEM, which contains 2mM L-Glutamine as final concentrate.
- We recommend seeding MSCs at approximately $3x10^3$~$6x10^3$ per cm^2.
- UltraGRO™ requires heparin at a final concentration of 2 IU/mL to be added in the culture media when supplemented with 5% UltraGRO™. Failure to add heparin will result in coagulation during cell culture in typical media.

Cell Lines

bone marrow mesenchymal stem cells, adipose tissue derived mesenchymal stem cells, umbilical cord derived mesenchymal stem cells, other mesenchymal stem cells

575 Fourteenth Street, NW Atlanta, GA 30318 USA(Manufacture) Website: www.atcbiomed.com/bio Email: sales@atcbiomed.com