

**Description**

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



| Product                                | Catalog No. | Spec. | Storage        | Shelf Life* |
|--|-------------|-------|----------------|-------------|
| UltraGRO™–Advanced<br>(Research grade) | HPCFDCRL05  | 50mL  | Store at –20°C | 24 months   |
|  | HPCFDCRL10  | 100mL |                |             |
|  | HPCFDCRL50  | 500mL |                |             |
| UltraGRO™–Advanced<br>(GMP grade)      | HPCFDCGL05  | 50mL  |                |             |
|  | HPCFDCGL10  | 100mL |                |             |
|  | HPCFDCGL50  | 500mL |                |             |

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

**Intended use**

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

**Important information**

Insoluble particles may form in thawed UltraGRO™–Advanced cell culture supplement. Published research has shown that particles will not alter the performance of the product.

**Safety information**

- Follow the handling instructions outlined in the Material Safety Data Sheets (MSDSs). Wear appropriate protective eyewear, clothing, and gloves.
- Human origin materials are non-reactive (donor level) for anti-HIV 1 & 2, anti-HCV and HBsAg. Handle in accordance with established bio-safety practices.

**MSC culture conditions**

**Media:**

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

**Culture type:** Adhesion

**Culture vessels:** Cell culture plates, T-flasks, G-Rex flasks or cell culture bags

**Temperature range:** 36°C to 38°C

**Incubator atmosphere:** Humidified atmosphere of 4–6% CO<sub>2</sub>. Ensure that proper gas exchange is achieved in culture vessels.

**Precipitation in Cell Culture**

- Insoluble particles may form in thawed UltraGRO™–Advanced, it is recommended to remove particles by centrifuge at 3,400 xg for 3~5 minutes.
- Filtering the completed medium (e.g. 5%), after UltraGRO™–Advanced is diluted in the basal medium, will not affect UltraGRO™–Advanced supplemented cell culture performance. However, 0.22 μm filtering is NOT recommended for 100% concentrate UltraGRO™–Advanced, as this may reduce 5% UltraGRO™–Advanced cell culture performance.
- Repeated freeze-thaw cycles should be avoided as they may cause an increase in insoluble particles and resulting potential decrease in UltraGRO™–Advanced performance.

**Protocol**

- UltraGRO™–Advanced 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 3×10<sup>3</sup> ~ 6×10<sup>3</sup> per cm<sup>2</sup>.
- For UltraGRO™–Advanced has been fibrinogen-depleted and does not require the addition of heparin in the cell culture media.

## Storage

UltraGRO™—Advanced product is most stable when stored frozen until needed. The recommended storage temperature is -20°C or -80°C. Thaw frozen

UltraGRO™—Advanced product in 37°C water bath before use. Once UltraGRO™—Advanced product 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 or -80°C.

## Cell Lines

Bone marrow mesenchymal stem cells

Adipose tissue derived mesenchymal stem cells

Umbilical cord derived mesenchymal stem cells

Other mesenchymal stem cells

## References

- Copland IB, Garcia MA, Waller EK, Roback JD, Galipeau J. The effect of platelet lysate fibrinogen on the functionality of MSCs in immunotherapy. *Biomaterials*. 2013;34(32) : 7840-50.
- **US FDA IND14825**, Autologous Bone Marrow Derived Mesenchymal Stromal Cells for Crohn's Disease.
- **US FDA IND16191**, Autologous Mesenchymal stem cells for GvHD.
- **US FDA IND14924**, Percutaneous Image Guided Delivery of Autologous Bone Marrow Derived Mesenchymal Stem Cells for the Treatment of Symptomatic Degenerated Intervertebral Disc Disease.
- **US FDA IND15970**, Autologous MSCs islet autograft via portal vein infusion to reduce onset of diabetes and improve glycemic control in patients with chronic pancreatitis.

上海揽宝仪器设备有限公司

订货电话:185-1629-2006

Email:sales@lab-pal.com

QQ:14699306

For additional technical information such as Safety Data Sheets (SDS), Certificates of Analysis, visit [www.atcbiomed.com](http://www.atcbiomed.com). For further assistance, email [sales@atcbiomed.com](mailto:sales@atcbiomed.com)

© 2015 AventaCell BioMedical Co., Ltd. All rights reserved. All trademarks herein are marks of AventaCell group and its subsidiaries.

DISCLAIMER: TO THE EXTENT ALLOWED BY LAW, AVENTACELL BIOMEDICAL AND/OR ITS AFFILIATE(S) WILL NOT BE LIABLE FOR SPECIAL, INCIDENTAL, INDIRECT, PUNITIVE, MULTIPLE OR CONSEQUENTIAL DAMAGES IN CONNECTION WITH OR ARISING FROM THIS DOCUMENT, INCLUDING YOUR USE OF IT. [www.atcbiomed.com](http://www.atcbiomed.com)