

Description

UltraGRO™-PURE cell culture supplement is a fibrinogen depleted, xeno-free media supplement for replacing FBS (fetal bovine serum) to support cell expansion from research through clinical trials to commercial use. UltraGRO™-PURE contains abundant growth factors and cytokines necessary for research or industrial cell growth and proliferation of multiple cell types, including MSCs.



Product	Catalog No.	Spec.	Storage	Shelf Life*
UltraGRO™-PURE (Research grade)	HPCHXCRL05	50mL	Store at -20°C or -80°C	12 months
	HPCHXCRL10	100mL		
	HPCHXCRL50	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™-PURE 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.
- UltraGRO™-PURE, is a cell culture supplement derived from human single donor platelets collected from healthy donors at FDA-licensed centers. Each donor has been tested using FDA-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. 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™-PURE. UltraGRO™-PURE shows optimal potency to support MSCs growth at 5% (v/v). Additional Heparin is **NOT** required for UltraGRO™-PURE.

Culture type: Adhesion

Seeding density: We recommend seeding MSCs at approximately $3 \times 10^3 \sim 6 \times 10^3$ per cm^2 .

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% CO₂. Ensure that proper gas exchange is achieved in culture vessels.

Precipitation in Cell Culture

- Insoluble particles may form in thawed UltraGRO™-PURE, 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™-PURE is diluted in the basal medium, will not affect UltraGRO™-PURE supplemented cell culture performance. However, 0.22 μm filtering is **NOT** recommended for 100% concentrate UltraGRO™-PURE, as this may reduce 5% UltraGRO™-PURE 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™-PURE performance.

Storage

UltraGRO™-PURE product is most stable when stored frozen until needed. The recommended storage temperature is -20°C or -80°C. Thaw frozen UltraGRO™-PURE product in a 37°C water bath before use. Once UltraGRO™-PURE 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.

For Technical and Ordering information, contact:

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

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