

Rapid, Consistent, Cost-Effective Cell Culture!

Optimizing Your Immune Cell Culture

AventaCell BioMedical's **UltraGRO™ & UltraGRO™-Advanced**, from the Helios BioScience line of products, were developed as cell culture supplements rich in growth factors and cytokines, as alternatives to FBS, to optimize your in-vitro culture of immune cells. **UltraGRO™ & UltraGRO™-Advanced** are manufactured from human platelets collected from healthy donors by FDA licensed blood centers to provide you with safe, consistent, and high performance cell culture supplements.

Benefits of UltraGRO™/UltraGRO™-Advanced

- Non-xenogeneic serum substitute
- Abundant natural growth factors and proteins
- Replace up to 5% human serum with 2.5% UltraGRO™/ UltraGRO™-Advanced
- Cost-effective choice for lower cost per billion cells produced
- No heparin required for UltraGRO™-Advanced
- CIK expansion to more than one billion cells in 14 days
- From pre-clinical to clinical trial with the same supplement

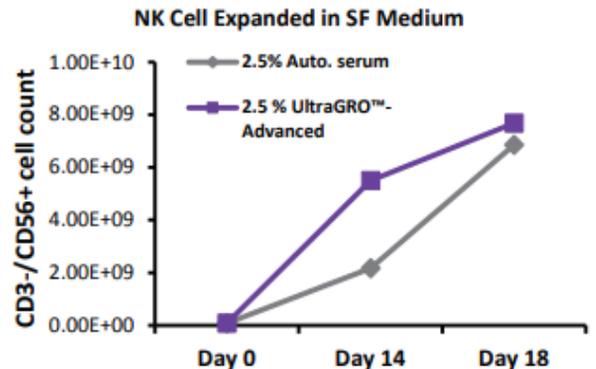
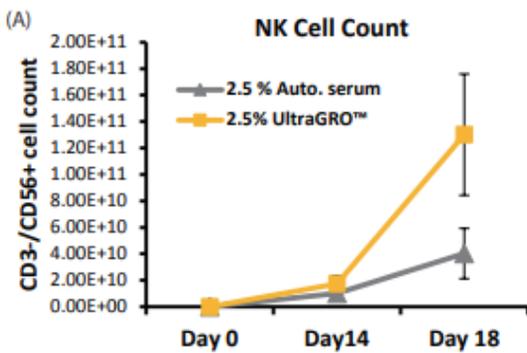


Fig. 2: The Performance UltraGRO™ on NK cell proliferation and activity. The CD3-CD56+ NK cell count. PBMCs were cultured in 2.5% autologous serum or UltraGRO™ supplemented medium with IL-2 and OKT-3, and the numbers of the cells were counted at the indicated days. The data is shown as mean of 3 independent experiment.*

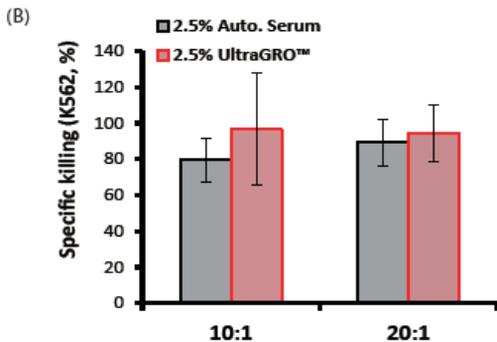


Fig. 1: The Performance UltraGRO™ on NK cell proliferation and activity. (A) The CD3-CD56+ NK cell count. PBMCs were cultured in 2.5% autologous serum or UltraGRO™ supplemented medium with IL-2 and OKT-3, and the numbers of the cells were counted at the indicated days. (n=4; mean ± SD) (B) The cytotoxicity activity of NK cells was analyzed after 18 days of culture.*

Ordering Information

Order Number	Product	Heparin Use	Volume (mL)
HPCPLCRL05	UltraGRO™	Required	50
HPCPLCRL10			100
HPCPLCRL50			500
HPCPLCGL05	UltraGRO™ (GMP Grade)	Required	50
HPCPLCGL10			100
HPCPLCGL50			500
HPCFDCRL05	UltraGRO™-Advanced	Not required	50
HPCFDCRL10			100
HPCFDCRL50			500
HPCFDCGL05	UltraGRO™-Advanced (GMP Grade)	Not required	50
HPCFDCGL10			100
HPCFDCGL50			500



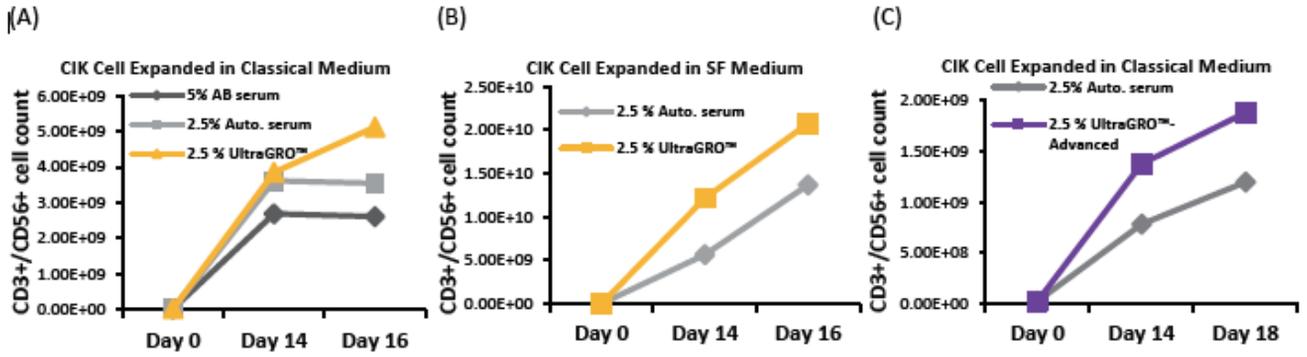


Fig. 3: The Performance UltraGRO™ and UltraGRO™-Advanced on CIK cell proliferation. PBMCs were cultivated in (A) RPMI1640 or (B) serum-free (SF) medium supplemented with 5% human AB serum, 2.5% autologous serum, or 2.5% UltraGRO™ and the CD3+/CD56+ cells were counted at the indicated days. (n=3; mean) (C) RPMI1640 medium supplemented with 2.5% autologous serum or 2.5% UltraGRO™-Advanced and the CD3+/CD56+ cells were counted at the indicated days. (n=3; mean)*

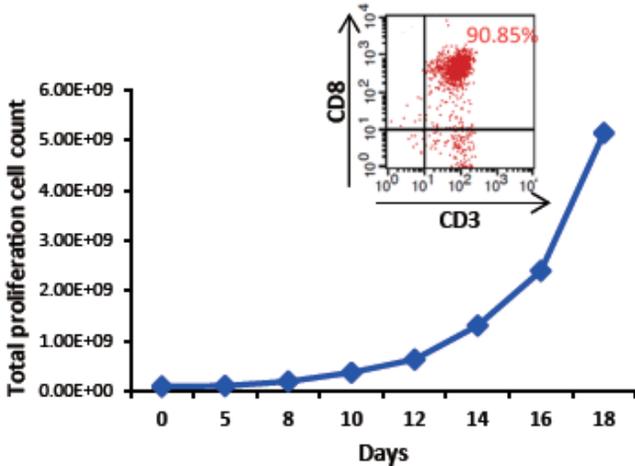


Fig. 4: The Performance UltraGRO™ on CD3+/CD8+ T cell proliferation.*

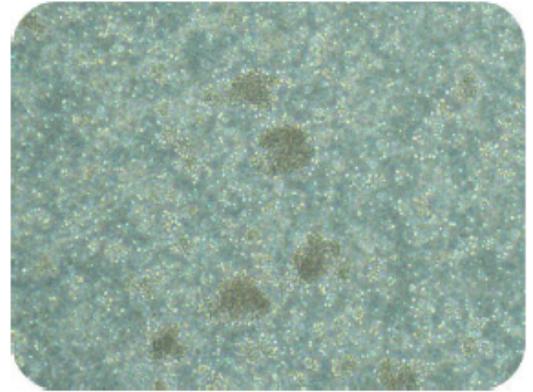


Fig. 5: PBMCs formed cell spheres after cultured in 2.5% UltraGRO™ medium supplemented with IL-2 and OKT3 for 5 days. A representative picture at 40x magnification.*

UltraGRO™ and UltraGRO™-Advanced can meet your needs!!



AventaCell BioMedical's products are manufactured under a GMP compliant Qualified Management System. Unless otherwise indicated, products are provided for in vitro use only, not for animal, therapeutic, or diagnostic use.

Your regulatory authority will provide guidance on the requirements for ancillary materials for cell therapy development applications. Depending on the requirements, AventaCell BioMedical may be able to work with you in meeting your regulatory and quality needs.

If you have any questions or would like to discuss the potential use of an UltraGRO™ product for your application please contact us.

