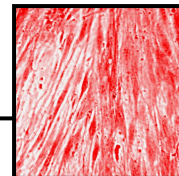


Poietics™ human adipose derived stem cells (ADSC)



Introduction

Adult stem cells capable of differentiation into mesenchymal derived tissues such as bone, cartilage and fat have in the past been predominantly isolated from bone marrow. More recently, much interest has developed in the use of adipose tissue-derived stem cells (ADSC) with similar self-renewal and differentiation capabilities. Human ADSC have been reported to be capable of differentiation along numerous lineages. Poietics™ human ADSCs, available from normal or diabetic donors, are isolated from human lipoaspirate and cryopreserved from primary cultures. Poietics™ adipose-derived stem cells and medium are quality tested together and guaranteed to give optimum performance as a complete cell system.

Adipose-derived stem cell system product

- One adipose-derived stem cell product at $\geq 1,000,000$ cells/vial (cryopreserved in the first passage).
- One adipose derived stem cell medium product BulletKit™, 500 ml
Poietics™ ADSC-GM BulletKit™ (PT-4505) contains one 500 ml bottle of adipose-derived stem cell basal medium and the following growth supplements: fetal bovine serum (FBS), 50 ml; L-glutamine, 5 ml; and gentamicin-amphotericin B (GA-1000), 0.5 ml.

Performance

Recommended seeding density for subculture	5000 cells/cm ²
Recommended feeding interval	3 - 4 days
Typical time from seeding to subculture readiness	6 - 7 days

Characterization of cells

Cell surface phenotype is analyzed by flow cytometry the second passage out of cryopreservation. Cells test positive for CD13, CD29, CD44, CD73, CD90, CD105, and CD166, and negative for CD14, CD31, and CD45. The level of CD34 expression is recorded FIO and is not used as a quality control release criteria.

Quality control

All cells are performance assayed and test negative for HIV-1, hepatitis-B & C, mycoplasma, bacteria, yeast and fungi. Cell viability and morphology are determined after recovery from cryopreservation. Certificates of analysis (CoA) for each cell lot are available.

Source

Human adipose tissue is obtained as lipoaspirate from patients undergoing elective liposuction surgery procedures.

Selected ADSC reviews

- Nakagami H, Morishita R, Maeda K, Kikuchi Y, Oghihara T, Kaneda Y. *J Atheroscler Thromb*. 2006 Apr; 13(2): 77-81.
- Parker AM, Katz AJ. *Expert Opin Biol Ther*. 2006 Jun; 6(6): 567-78.
- Fraser JK, Wulur I, Alfonso Z, Hedrick MH. *Trends Biotechnol*. 2006 Apr; 24(4): 150-4.
- Strem BM, Hicok KC, Zhu M, Wulur I, Alfonso Z, Schreiber RE, Fraser JK, Hedrick MH. *Keio J Med*. 2005 Sep;54(3):132-41.
- Rodriguez AM, Elabd C, Amri EZ, Ailhaud G, Dani C. *Biochimie*. 2005 Jan; 87(1): 125-8.
- Strem BM, Hedrick MH. *Trends Biotechnol*. 2005 Feb; 23(2): 64-6.
- Guilak F, Awad HA, Fermor B, Leddy HA, Gimble JM. *Biorheology*. 2004; 41(3-4): 389-99.
- Gimble JM, Guilak F. *Curr Top Dev Biol*. 2003; 58:137-60.
- Gimble JM. *Expert Opin Biol Ther*. 2003 Aug; 3(5): 705-13.

Ordering information

PT-5006	ADSC, adipose-derived stem cells, cryopreserved	≥ 1,000,000 cells
PT-5007	ADSC, adipose-derived stem cells, cryopreserved (Diabetes Type I)	≥ 1,000,000 cells
PT-5008	ADSC, adipose-derived stem cells, cryopreserved (Diabetes Type II)	≥ 1,000,000 cells
PT-4505	ADSC-GM BulletKit™, ADSC basal medium plus SingleQuots™ of growth supplements	
PT-3273	ADSC-BM, adipose derived stem cell basal medium	500 ml
PT-4503	ADSC-GM SingleQuots™, formulates ADSC-BM to ADSC-GM	

When placing an order or for technical service, please refer to the product numbers and descriptions listed above. For a complete listing of all Poietics™ products, refer to the Lonza website or the current Lonza catalog. To obtain a catalog, additional information or technical service you may contact Lonza by web, e-mail, telephone, fax or mail.

Product warranty

CULTURES HAVE A FINITE LIFESPAN *IN VITRO*. Lonza warrants its cells only if Poietics™ media are used, and the recommended protocols are followed. Cryopreserved adipose derived stem cells are assured to be viable and functional when thawed and maintained properly.

THESE PRODUCTS ARE FOR RESEARCH USE ONLY. Not approved for human or veterinary use, for application to humans or animals, or for use in clinical or *in vitro* procedures.

WARNING: CLONETICS™ AND POIETICS™ PRODUCTS CONTAIN HUMAN SOURCE MATERIAL, TREAT AS POTENTIALLY INFECTIOUS. Each donor is tested and found non-reactive by an FDA approved method for the presence of HIV-1, hepatitis B virus and hepatitis C virus. Where donor testing is not possible, cell products are tested for the presence of viral nucleic acid from HIV, hepatitis B virus, and hepatitis C virus. Testing can not offer complete assurance that HIV-1, hepatitis B Virus, and hepatitis C virus are absent. All human sourced products should be handled at the biological safety level 2 to minimize exposure of potentially infectious products, as recommended in the CDC-NIH manual, [Biosafety in Microbiological and Biomedical Laboratories](#), 5th edition. If you require further information, please contact your site safety officer or Scientific Support.