Human Embryonic And Induced Pluripotent Stem Cells

From the contents: Part I: Maintenance and Cryopreservation of ES and iPS cells 1. Feeder-Free Growth of Undifferentiated Human Embryonic Stem Cells Dong-Youn Hwang 2. Growth of Human Embryonic Stem Cells in Long-Term Hypoxia Vladimir Zachar, Simon C. Weli, Mayuri S. Prasad, and Trine Fink 3. Laboratory Scale Purification of a Recombinant E-Cadherin-IgG Fc Fusion Protein that Provides a Cell Surface Matrix for Extended Culture and Efficient Subculture of Human Pluripotent Stem Cells Masato Nagaoka and Stephen A. Duncan 4. Scale-Up of Single Cell-Inoculated Suspension Cultures of Human Embryonic Stem Cells Harmeet Singh, Pamela Mok, and Robert Zweigerdt 5. Three-Dimensional Culture for Expansion and Differentiation of Embryonic Stem Cells Guang-wei Sun, Xiao-xi Xu, Nan Li, Ying Zhang, and Xiao-jun Ma 6. Expansion of Pluripotent Stem Cells in Defined Xeno-Free Culture System Kristiina Rajala 7. Pluripotent Stem Cells In Vitro from Human Primordial Germ Cells Behrouz Aflatoonian and Harry D. Moore 8. Cryopreservation of Human Embryonic Stem Cells and Induced Pluripotent Stem Cells Frida Holm Part II: Generation of Human Induced Pluripotent Stem Cells: Viral and Nonviral Vector-Based Nuclear Reprogramming 9. Induced Pluripotent Stem Cells (iPSC) from Cord Blood CD133+ Cells Using Oct4 and Sox2 Alessandra Giorgetti, Nuria Montserrat, and Juan Carlos Izpisua Belmonte 10. Generation, Maintenance, and Differentiation of Human iPS Cells from Cord Blood Naoki Nishishita, Chiemi Takenaka, and Shin Kawamata 11. Generation of iPS Cells from Human Umbilical Vein Endothelial Cells by Lentiviral Transduction and Their Differentiation to Neuronal Lineage Maria V. Shutova, Ilya V. Chestkov, Maria A. Lagarkova, and Sergey L. Kiselev 12. Generation of Human Induced Pluripotent Stem Cells from Endoderm Origin Cells Hua Liu, Su Mi Choi, and Yoon-Young Jang 13. Derivation of Human Induced Pluripotent Stem Cells on Autologous Feeders Kazutoshi Takahashi 14. Human Mesenchymal Stem Cells and iPS Cells (Preparation Methods) Hiroe Ohnishi, Yasuaki Oda, and Hajime Ohgushi 15. Retroviral Vector-Based Approaches for the Generation of Human Induced Pluripotent Stem Cells from Fibroblasts and Keratinocytes Athanasia D. Panopoulos, Sergio Ruiz, and Juan Carlos Izpisua Belmonte 16. Generation of Nonviral Integration-Free Induced Pluripotent Stem Cells from Plucked Human Hair Follicles Ann Peters and Elias T. Zambidis Part III: Generation of

Patient-Specific iPS Cells for Clinical Application 17. Generation of iPS Cells from Human Skin Biopsy Katie Avery and Stuart Avery 18. Generation of Induced Pluripotent Stem Cells from Human Amnion Cells Masashi Toyoda, Shogo Nagata, Hatsune Makino, Hidenori Akutsu, Takashi Tada, and Akihiro Umezawa Part IV: Lineage-Specific Differentiation of hES and iPS Cells 19. In Vitro Two-Dimensional Endothelial Differentiation of Human Embryonic Stem Cells Xiaolong Lin, Hua Jiang, Zack Zhengyu Wang, and Tong Chen 20. Feeder-Free Culture for High Efficiency Production of Subculturable Vascular Endothelial Cells from Human Embryonic Stem Cells Kumiko Saeki 21. Feeder-Independent Maintenance of Human Embryonic Stem Cells and Directed Differentiation into Endothelial Cells under Hypoxic Condition Xiuli Wang 22. Differentiation of Endothelial Cells from Human Embryonic Stem Cells and Induced Pluripotent Stem Cells Shijun Hu, Preston Lavinghousez, Zongjin Li, and Joseph C. Wu 23. Differentiation of Human Embryonic and Induced Pluripotent Stem Cells into Blood Cells in Coculture with Murine Stromal Cells ... EAN/ISBN : 9781617792670 Publisher(s): Springer, Berlin, Springer, New York Format: ePub/PDF Author(s): Ye, Kaiming - Jin, Sha