



Human Embryonic Progenitor Cell Line 4SKEL20

Cat No. ES-127

The clonal human embryonic progenitor cell line 4SKEL20 was derived from the registered parental hES cell line WA09 as described (West et al, 2008). It displays markers of vascular progenitors with the most distal HOX gene expression being HOXB7. It is FOXF1 positive, consistent with splanchnopleuric mesoderm (Peterson, R.S. et al, 1997) and expresses the primitive vascular marker KDR (Dumont, D.J. et al, 1995), and PECAM1.

Positive mRNA Markers: HOXB7, KDR, FOXF1, PECAM1, LMO2, GATA3

Product Information:

Derivation: Progenitor line 4SKEL20 was derived from the parental NIH registered Human ES cell line H9 (WA09) as previously described (West, M.D. et al, 2008).

Cell Number: Vial contains >500,000 cells cryopreserved in 1 ml of FBS with 10% DMSO.

Recommended Growth Medium: ES-M180

Recommended Culture Conditions: Cells should be plated onto tissue culture grade polystyrene plastic coated with 0.1% gelatin. Following rapid thawing and slow dilution in the final culture medium, the initial seeding density should be approximately 20,000 cells/cm². Cells should be maintained at 37°C in a humidified incubator preferably with 5% CO₂ and 5% oxygen with media change at least twice per week. Upon reaching confluence they should be split 1:3 for routine maintenance. Note: confluence for more than two days may lead to terminal differentiation.

Population Doubling Time: Approximately 50 hours.

Population Doubling: Progenitor line 4SKEL20 is sold at passage 11 (original clonal isolate in confluent 1.9 cm² well being P1), which corresponds to approximately 14.5 doublings since the first 1.9 cm² well and approximately 31 doublings since its original clonal plating. When used properly this product should scale for a minimum of 10 population doublings.

Quality Control:

Sterility: The line is negative for HIV (1, 2), HBV, HCV, bacteria, mycoplasma, and fungal contamination.

Thaw Test Result: >80% viability, >90% attachment, growth to confluence, and maintenance of original morphology appearance.



Certificates of Analysis: Available on request.

Restrictions: These cells are provided for research purposes only. They are not for human use, and may not be used for commercial purposes. The user is responsible for proper handling upon receipt.

Technical Assistance: Please contact a representative at Embryome Sciences (technicalsupport@embryome.com or (510) 521-3390) for technical assistance.

References

Dumont, D.J., Fong, G-H., Puri, M.C., Gradwohl, G., Alitalo, K., and Breitman, M.L. 1995. Vascularization of the mouse embryo: A study of flk-1, tek, tie, and vascular endothelial growth factor expression during development. *Dev. Dyn.* 203:80-92.

Peterson, R.S., Lim, L., Ye, H., Zhou, H., Overdier, D.G., and Costa, R.H. 1997. The winged helix transcriptional activator HFH-8 is expressed in the mesoderm of the primitive streak stage of mouse embryos and its cellular derivatives. *Mech. Dev.* 69:53-69.

West, M.D., Sargent, R.G., Long, J., Brown, C., Chu, J-S., Kessler, S., Derugin, N., Sampathkumar, J., Burrows, C., Vaziri, H., Williams, R., Chapman, K.B., Larocca, D., Loring, J.F., and Murai, J. 2008. The ACTCellerate Initiative: large-scale combinatorial cloning of novel human embryonic stem cell derivatives. *Reg. Med.* 3(3): 287-308.

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