

Supplementary Table S1. Percentages of cells positive for stage-specific markers in mono-cultures of human umbilical vein endothelial cells (HUVEC), mean \pm standard deviation. n.d. = not detected

	PECAM1	HNF4A	KRT18	VWF
EGM complete	91 \pm 6	n.d.	n.d.	79 \pm 5
HCM-I + EGM complete	71 \pm 23	n.d.	n.d.	83 \pm 14
HCM-I + EGM Supplements	73 \pm 13	n.d.	n.d.	62 \pm 12

Supplementary Table S2. Percentages of cells positive for stage-specific markers in cultures of human induced pluripotent stem cells (hiPSC), mean \pm standard deviation. n.d. = not detected

	POU5F1	KRT18	HNF4A	PECAM1
Undiff. hiPSC	99 \pm 3	n.d.	n.d.	n.d.
HCM-I/II	n.d.	80 \pm 6	60 \pm 30	n.d.
HCM-I + EGM complete	n.d.	47 \pm 14	28 \pm 19	n.d.
HCM-I + EGM supplements	n.d.	49 \pm 14	20 \pm 15	n.d.
HCM-I + EGM complete +HUVEC	n.d.	60 \pm 17	11 \pm 6	37 \pm 17
HCM-I + EGM supplements + HUVEC	n.d.	38 \pm 10	16 \pm 15	23 \pm 26

Supplementary Table 3. Compositions of basal media as provided by the manufacturers

Component	HCM (Lonza)	EGM complete (PromoCell)
Glucose	10 mM	5.6 mM
FCS / BSA	BSA: fatty acid free ¹	FCS: 0.02 ml/ml
Bovine hypothalamic extract (rich in endothelial cell growth factor)	/	0.004 ml/ml
Epidermal Growth Factor (recombinant human)	Included ¹	0.1 ng/ml
Basic Fibroblast growth factor (recombinant human)	/	1 ng/ml
Heparin	/	90 µg/ml
Hydrocortisone	Included ¹	1µg/ml
Insulin	Included ¹	/
Transferrin	Included ¹	/
Ascorbic acid	Included ¹	/

¹ Concentrations of supplements not published