Supplementary Table S1. Comparative analysis of hemogenic endothelial populations identified by different groups

Phenotype		Endothelial Potential	Hematopoietic CFC potential	Lymphoid Potential	Presence of bipotential cells/EHT* demonstration	Separation of HE from non-HE	Time-frame for detection/Differentiation system	Ref
Endothelial Markers	Hemato-poietic Markers							
VE-cad$^+$ CD31$^+$ KDR$^+$	CD45$^-$	Formed endothelial monolayer when cultured in endothelial conditions	Freshly isolated cells lacked CFC activity in serum-containing clonogenic medium, but acquired CFC potential after in vitro culture	Not tested	0.18% cells were bipotential (produced both endothelial and hematopoietic cells)	Not separated	3 days before emergence of CD45$^+$ cells in serum-containing EB** system	[99]
CD31$^+$ CD34$^+$ > 90% VE-cad$^+$	CD43$^-$ CD45$^-$ CD41a$^-$ CD235a$^-$	Not tested	Cells showed CFC potential after coculture with DLL4-OP9	Cells showed T cell potential after coculture with DLL4-OP9. T cell potential was enhanced by inhibition of TGFβ signaling at early stages of mesodermal development	Not tested	Not separated	1-3 days before emergence of CD45$^+$ cells in serum-free EB system; the late HE cells (1 day before emergence of CD45$^+$ cells) had higher T cell potential as compare to early HE (3 days before emergence of CD45$^+$ cells)	[66]

VE-cad-promoter (VPr)-driven fluorescent reporter positive cells	CD41Pr $^{-}$ CD43^{-}	VPr^{+}CD41Pr $^{-}$ cells displayed primary endothelial characteristics before transition to blood	CD43^{+} cells derived from VPr^{+} cells generated all types of CFCs	Not tested	Real time imaging demonstrated that VPr^{+} cells undergo EHT after two divisions	Hemogenic activity within CD43^{-} CD31^{+}VPr^{+} subset mostly segregated to CD73^{-} fraction	1-2 days before emergence of CD41Pr^{+} cells in hESC coculture with endothelial cells	102
VE-cad^{+} CD31^{+} CD34^{+} KDR^{+}	CD43^{-} CD235a^{-} CD41a^{-} CD45^{-}	Formed endothelial monolayer when cultured in endothelial conditions	Freshly isolated cells lacked CFC activity in serum-free and serum-containing clonogenic medium, but acquired CFC potential after culture on OP9	Not tested	Real time imaging demonstrated direct EHT; Bipotential cells were detected at ~2% frequency	HE separated from non-HE based on lack of CD73 expression	1-3 days before emergence of CD45^{+} cells in hPSC/OP9 coculture	86
VE-cad^{+} *** CD31^{+} KDR^{+}	CD43^{low} CD235a^{+} CD41a^{-} CD45^{-}	Formed endothelial monolayer when cultured in endothelial conditions	Freshly isolated cells showed FGF2 and hematopoietic cytokine-dependent CFC potential in serum-free clonogenic medium.	Not tested	Cells displayed primary hematopoietic characteristics and grew only few endothelial cells in culture on OP9; Bipotential cells were not detected	Not applicable	1-2 days before emergence of CD45^{+} cells in hPSC/OP9 coculture	86

*EHT is endothelial-hematopoietic transition; **EB is embryoid body; ***This population was designated by authors as angiogenic hematopoietic progenitors (AHP).