

	Endothelial cells			Mural cells
	light	intermediate	dark	
Free ribosomes	+	++	+++	+++
Polyribosomes	+	++	++	+++
Rough endoplasmic reticulum	+	+	+	+++, dilated cisternae
Golgi	+	+	+	+
Mitochondria	+	+	++	+++
Filaments	+	+	+++	+
caveolae	yes, luminal membrane	yes, luminal membrane	yes, luminal membrane	no
Clathrin coated vesicles	yes, luminal membrane	yes, luminal membrane	yes, luminal membrane	no
Weibel-Palade bodies	yes	yes	yes	no
Microvillae	yes, luminal membrane	?	yes, luminal membrane	sometimes, parenchyma
Nucleus	elongated	elongated	elongated	irregular
Heterochromatin clumps	few	few	few	associated Nuclear envelope
Tight junctions	yes	yes	yes	no
Adherent junctions	yes	yes	yes	sometimes with endothelial cells
Contact basal lamina				yes

Table S1 Ultrastructural features of second trimester human brain endothelial and mural cells, related to Figures 2 and S2.