

Comparative differences and similarities between cytocapsula, cytocapsular tube, and other six organelles.

	Cytocapsula	Cytocapsular tube	Pseudopodia protrusion	Lamellipodia	Filopodia	Bleb	Type II Epithelial bridge	Nanotube
Extension of plasma membrane	-	-	+	+	+	+	+	+
Enclosed by plasma membrane	-	-	+	+	+	+	+	+
Extra-plasma membrane	+	+	-	-	-	-	-	-
Present in 2D or 3D environment	3D	3D	3D	2D	2D	2D&3D	2D	2D&3D
Existence without cells	+(up to 48h)	+	-	-	-	-	-	-
Diameter/width	10-250µm	5-35µm	<1µm	0.1-0.2 µm	0.1-0.3µm	0.1-0.3µm	<0.2µm	50-200nm
Length	15-250µm (major axis)	20-1000µm	2-10 µm	N/A	3-10µm	<2µm	Up to 570µm	Up to 100µm
Topology	Sphere, oval,	Tube-shaped	Finger-protrusion	Flat sheet	Finger-shaped	Bud-shaped	Finger-protrusion	Tiny tube
Open/closed ends	Closed	Two closed ends	One closed end	One closed end	One closed end	One closed end	One closed end	Two open ends
Generated by single mammalian cell	+	+	+	+	+	+	+	-
Number per single cell	1	1 (or with branch)	1 or multiple (1-3 generations)	1	Multiple	Multiple	Multiple	Multiple
Envelope whole cell (s)	+(≥1 cell)	+(≥1 cell)	-	-	-	-	-	-
Separate cell from ECM	+	+	-	-	-	-	-	-
Permit cell entry	+(≥1 cell)	+(≥1 cell)	-	-	-	-	-	-
Permit ecellularization	+	+	-	-	-	-	-	-
Function(s)	Supporting scaffolds; cell covering; separate cell from ECM; permit ecellularization nad cell entry	Cell tubular transportation of single cells and multiple cells; promote 3D cell relocation within; cell covering ; separate cell from ECM; permit ecellularization and cell entry; supporting scaffolds	Promote 3D cell migration	Promote 2D cell migration	Promote 2D cell migration	Promote 2D/3D cell migration	Plasma component transportation; Promote 2D cell migration	cell communication; organelle transportation
Enclosed by biomembrane	+	+	+	+	+	+	+	+
Single cell migration inside	+	+	-	-	-	-	-	-
Multiple cell migration (streaming) inside	-	+	-	-	-	-	-	-
Life time (with cell, <i>in vitro</i>)/duration of structure	Up to 72h	Up to 98h	Minutes	Minutes	Minutes	< 3 min	N/A	N/A
Network formation	-	+	-	-	-	-	-	-
Cell in the lumen	+	+	-	-	-	-	-	-
Retraction ability	+	+	+	+	+	+	+	N/A
Auto membrane degradation not affect cell integrity	+	+	-	-	-	-	-	-
Ability to shrink beyond cell	+	+	-	-	-	-	-	-
Can be enlarged by cell body	+	+	-	-	-	-	-	-
With nano-protrusions	+	+	-	-	-	-	-	-