

		All	Empty SUVs	+CD-VAMP2	-VAMP2	-Munc18-1
All	Protrusion		2.66e-04	1.01e-03	0.0000	0.2144
	Contact		0.7457	5.31e-04	2.66e-04	0.4774
	Extended		9.19e-03	0.4842	0.1012	0.2205
Empty SUVs	Protrusion	2.66e-04		0.0952	0.9101	2.65e-03
	Contact	0.7457		0.1949	0.1247	0.9721
	Extended	9.19e-03		0.0150	0.1013	0.0746
+CD-VAMP2	Protrusion	1.01e-03	0.0952		2.73e-04	0.0540
	Contact	5.31e-04	0.1949		0.6062	2.55e-03
	Extended	0.4842	0.0150		0.1627	0.4774
-VAMP2	Protrusion	0.0000	0.9101	2.73e-04		6.52e-10
	Contact	2.66e-04	0.1247	0.6062		1.01e-03
	Extended	0.1012	0.1013	0.1627		0.7020
-Munc18-1	Protrusion	0.2144	2.65e-03	0.0540	6.52e-10	
	Contact	0.4774	0.9721	2.55e-03	1.01e-03	
	Extended	0.2205	0.0746	0.4774	0.7020	

Table S2. Benjamini-Hochberg-adjusted two-sided P-values from comparisons between each proportion of observed membrane morphology obtained from different samples using cryoET (Figure 2G).

The proportion of ‘protrusion’, ‘contact’ and ‘extended’ membrane morphologies were counted from high-magnification tomograms (see supplementary methods) from three independent biochemical and cryoET experiments. The three replicates for each proportion were used to estimate their standard error using the James-Stein shrinkage estimator [35] and consequently a z-test was performed (see supplementary methods). Values highlighted in grey indicate significant tests at a false discovery rate of 5%.