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Title:	Site-specific phosphorylation of villin remodels the actin cytoskeleton to regulate Sendai viral glycoprotein-mediated membrane fusion
Authors:	Sarkar, D.P. (/jspui/browse?type=author&value=Sarkar%2C+D.P.)
Keywords:	Actin Host–pathogen interaction Membrane fusion Sendai virosome
Issue Date:	2019
Publisher:	FEBS Press
Citation:	FRBR Letters, 593(15):1927-1943.
Abstract:	Connivance of cellular factors during virus-host cell membrane fusion is poorly understood. We have recently shown that cellular villin plays an important role during membrane fusion of reconstituted Sendai virosomes with hepatocytes. Here, we employed villin-null Chinese Hamster Ovary (CHO) cells, where villin expression led to an increased fusion with virosomes, which was further enhanced due to tyrosine phosphorylation in the presence of c-src. However, the villin RRI mutant, lacking actin-severing function, failed to augment membrane fusion. Furthermore, quantitative mass spectrometry and detailed analysis revealed Tyr499 to be the key phosphorylation site of villin responsible for the enhancement of virosome-CHO cell fusion. Overall, our results demonstrate a critical role for villin and its cell-type dependent phosphorylation in regulating membrane fusion.
Description:	Only IISERM authors are available in the record.
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