Abstract

Described herein are methods, compositions, kits and synthetic peptide shuttle agents relating to the transduction of proteinaceous and/or non-proteinaceous cargoes. The method generally comprises contacting target eukaryotic cells with a non-proteinaceous cargo and a concentration of a synthetic peptide shuttle agent sufficient to increase the transduction efficiency of the non-proteinaceous cargo, as compared to in the absence 5 of said synthetic peptide shuttle agent. In embodiments, the non-proteinaceous cargo may be a drug, such as a small molecule drug, for treating a disease. In other embodiments, novel synthetic peptide shuttle agents having transduction activity for proteinaceous and/or non-proteinaceous cargoes are described, as well as the use of propidium iodide or other membrane-impermeable fluorescent DNA intercalating agent as a surrogate cargo for selecting versatile synthetic peptide shuttle agents having transduction activity for both proteinaceous and non-10 proteinaceous cargoes.

Fig. 3