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18. A transfection reagent kit which comprises a transfection agent and one or more peptides comprising Sp-NLSNLS.

19. The kit of claim 18, wherein the kit comprises a cationic lipid transfection agent.

20. The kit of claim 19, wherein the cationic lipid is a polyvalent cationic lipid.

21. The kit of claim 20, wherein the polyvalent cationic lipid is selected from the group consisting of 2,3-dioleoyloxy-N-[2-(sperminocarboxamido)ethyl]-N,N-dimethyl-1-propanaminium trifluoro-acetate (DOSPA), 1,3-dioleoyloxy-2-(6-carboxy spermyl)-propylamide (DOSPER), 5-carboxyspermylglycine dioctadecyl-amide (DOGS), tetramethyltrapalmitoyl spermine (TMTPS), tetramethyltetraoleyl spermine (TMTOS), tetramethyltetralauryl spermine (TMTLS), tetramethyltetramyristyl spermine (TMTMS), and tetramethyldioleyl spermine (TMDOS).

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22. The kit of claim 18, wherein the kit further comprises one or more neutral lipids.

23. The kit of claim 22, wherein the one or more neutral lipids are selected from dioleoylphosphatidylethanolamine (DOPE), diphytanoylphosphatidylethanolamine (DPhPE) and cholesterol.

24. The kit of claim 18, wherein the kit comprises a 3:1 (w/w) mixture of the polycationic lipid 2,3-dioleoyloxy-N-[2-(sperminocarboxamido)ethyl]-N,N-dimethyl-1-propanaminium trifluoroacetate and dioleoylphosphatidyl-ethanolamine.

25. A method for transfecting a cell with a nucleic acid, the method comprising the step of contacting the cell in vitro with the transfection composition of claim 2.

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