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- To the extent necessary to understand or complete the disclosure of the present invention, all publications, patents, and patent applications mentioned herein are expressly incorporated by reference therein to the same extent as though each were individually so incorporated.

The invention claimed is:

1. A process for inducing a specific immune response to a protein product encoded by a polynucleotide consisting essentially of administering the polynucleotide and an endocytosis stimulatory amount of purified Invaplex 24 or 50 to an eukaryotic cell in a host causing the polynucleotide to enter the cell and express the protein product, wherein the polynucleotide and Invaplex are separately introduced.
2. A process for expressing a protein consisting essentially of introducing a vector or plasmid containing expressible gene(s), which encodes a protein(s) of interest, and a transfecting amount of purified Invaplex 24 or 50 to an eukaryotic cell for a time sufficient to allow the vector or plasmid to enter the cell and express the gene, wherein the vector or plasmid and Invaplex are separately introduced.
3. The process of claim 1, wherein the polynucleotide is DNA or RNA.
4. The process of claim 1, wherein the administration step is mucosal administration.
5. The process of claim 4, wherein the mucosal administration is intranasal, rectal, vaginal, oral or ocular.
6. A process for labeling a eukaryotic cell or internal cell structure consisting essentially of introducing a marker and an endocytosis stimulatory amount of a purified Invaplex 24 or 50 to the eukaryotic cell causing the marker to enter the cell and measuring the presence of the marker within the cell, wherein the marker and Invaplex are separately introduced.
7. The process of claim 1, wherein the amount of Invaplex 24 or 50 present is between 60 and 500 µg/ml.

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