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(54) **Title**: METHODS OF LONG-TERM CULTURE OF EUKARYOTIC CELLS AND USES THEREOF

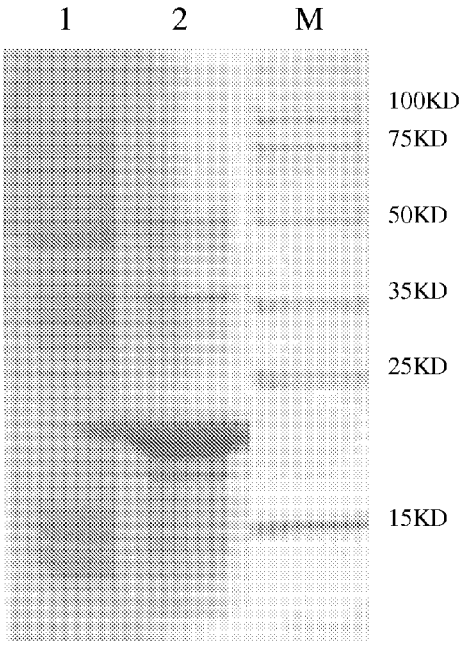


Fig. 1

(57) **Abstract**: An immortalizing protein complex, comprises an internalizing molecule, a transforming polypeptide and an endosome releasing molecule; all molecule and/or polypeptides being operatively linked to one or more of the other polypeptides, and optionally one or more of a nuclear internalizing molecule and a telomere extending molecule. A method of producing immortalized cells or extending the life of primary cells, comprises contacting the immortalizing protein complex of the invention with a target cell under conditions and for a period of time effective for the protein complex to be internalized and the transforming polypeptide released, and allowing for the transforming polypeptide to extend the life of the cell and/or overcome cell arrest. Also provided are an immortalizing polynucleotide encoding the protein complex, a hybrid vector carrying an expression vector and the polynucleotide, a cell transformed with the hybrid vector, a cell expressing the protein complex, and a cell immortalization kit that comprises the protein complex and/or a polynucleotide encoding the protein and/or a hybrid expression vector carrying the polynucleotide, and instructions for its(their) use to practice the method for immortalizing cells. Cells and tissue transplants comprising the cell(s), and various uses for the immortalized cells and tissue thereof are also provided.

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