METHOD OF EFFICIENTLY ESTABLISHING INDUCED PLURIPOTENT STEM CELLS

ABSTRACT

The present invention provides a method of improving the efficiency of establishment of induced pluripotent stem (iPS) cells, comprising inhibiting the p53 function in the step of somatic cell nuclear reprogramming. The inhibition of p53 function is achieved by bringing a substance selected from the group consisting of (1) chemical inhibitors of p53, (2) dominant negative mutants of p53 and nucleic acids that encode the same, (3) siRNAs and shRNAs against p53 and DNAs that encode the same, and (4) p53 pathway inhibitors, into contact with a somatic cell, and the like. The present invention also provides an agent for improving the efficiency of establishment of iPS cells, the agent comprising an inhibitor of p53 function, particularly (1) chemical inhibitors of p53, (2) dominant negative mutants of p53 and nucleic acids that encode the same, (3) siRNAs and shRNAs against p53 and DNAs that encode the same, and (4) p53 pathway inhibitors. The present invention further provides a method of producing an iPS cell, comprising bringing a nuclear reprogramming substance and an inhibitor of p53 function into contact with a somatic cell.

No Fig.