ABSTRACT

The present invention provides a reciprocal-flow-type nucleic acid amplification device comprising:
heaters capable of forming a denaturation temperature zone and an extension/annealing temperature zone;
a fluorescence detector capable of detecting movement of a sample solution between the two temperature zones;
a pair of liquid delivery mechanisms that allow the sample solution to move between the two temperature zones and that are configured to be open to atmospheric pressure when liquid delivery stops; a substrate on which the chip for nucleic acid amplification according to claim 2 can be placed; and a control mechanism that controls driving of each liquid delivery mechanism by receiving an electrical signal from the fluorescence detector relating to movement of the sample solution from the control mechanism; the device being capable of performing real-time PCR by measuring fluorescence intensity for each thermal cycle.