

ABSTRACT

The present invention relates to a method for nucleic acid replication and novel artificial base pairs.

The method of the present invention for nucleic acid replication is characterized in that a deoxyribonucleoside 5'-triphosphate, in which the hydroxyl group of phosphoric acid at the γ -position is substituted with a group selected from the group consisting of an amino group, a methylamino group, a dimethylamino group, a mercapto group and a fluoro group, is used as a substrate during replication reaction. The novel artificial base pairs of the present invention are characterized in that 7-(2-thienyl)-imidazo[4,5-b]pyridine (Ds) or an analog thereof forms a base pair with pyrrole-2-carbaldehyde (Pa) or an analog thereof.