[CLAIMS]

[Claim 1]

An artificial nucleic acid-cleaving enzyme comprising:

a nuclease domain which is a polypeptide containing an amino acid sequence set forth at positions 391 to 585 of SEQ ID NO: 1 or positions 389 to 579 of SEQ ID NO: 3, or a mutant polypeptide thereof; and

a nucleic acid-binding domain,

wherein the mutant polypeptide is a polypeptide containing an amino acid sequence having at least 90% sequence identity with the amino acid sequence set forth at positions 391 to 585 of SEQ ID NO: 1 or positions 389 to 579 of SEQ ID NO: 3 and having nuclease activity, and

wherein the nucleic acid-binding domain contains a zinc finger, TALE, CRISPR/Cas, or PPR.

[Claim 2]

The artificial nucleic acid-cleaving enzyme according to claim 1, further comprising: a linker located between the nuclease domain and the nucleic acid-binding domain.

~~[Claim 3]~~

~~The artificial nucleic acid-cleaving enzyme according to claim 1 or 2, wherein the nucleic acid-binding domain contains a zinc finger, TALE, CRISPR/Cas,~~

~~or PPR.~~

[Claim 3~~4~~]

An isolated nucleic acid comprising: a nucleic acid sequence encoding the artificial nucleic acid-cleaving enzyme according to any one of claims 1 or 2~~to 3~~.

[Claim 4~~5~~]

A vector comprising: the nucleic acid according to claim 3~~4~~, or a transcription product or translation product thereof.

[Claim 5~~6~~]

A method for modifying a target nucleic acid, comprising: introducing into a cell(except for a cell present in a human body, a human germ cell and a human embryonic cell), the artificial nucleic acid-cleaving enzyme according to any one of claims 1 or 2~~to 3~~, the nucleic acid according to claim 3~~4~~, or the vector according to claim 4~~5~~.

[Claim 6~~7~~]

The method according to claim 5~~6~~, wherein the artificial nucleic acid-cleaving enzyme, nucleic acid, or vector is two or more kinds of artificial nucleic acid-cleaving enzymes, a nucleic acid encoding the two or more kinds of artificial nucleic acid-cleaving enzymes, or a vector containing the nucleic acid, a transcription product thereof, or a translation product

thereof.

[Claim 7~~8~~]

A kit for modifying a target nucleic acid, comprising: the artificial nucleic acid-cleaving enzyme according to any one of claims 1 or 2~~to 3~~, the nucleic acid according to claim 3~~4~~, or the vector according to claim 4~~5~~.

[Claim 8~~9~~]

The kit according to claim 7~~8~~, wherein the artificial nucleic acid-cleaving enzyme, nucleic acid, or vector is two or more kinds of artificial nucleic acid-cleaving enzymes, a nucleic acid encoding the two or more kinds of artificial nucleic acid-cleaving enzymes, or a vector containing the nucleic acid, a transcription product thereof, or a translation product thereof.