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(54) Title: NOVEL, NON-NATURALLY OCCURRING CRISPR-CAS NUCLEASES FOR GENOME EDITING

(57) Abstract: The present invention relates to a nucleic acid molecule encoding an RNA-guided DNA endonuclease, which is (a) a nucleic acid molecule encoding the RNA-guided DNA endonuclease comprising or consisting of the amino acid sequence of SEQ ID NO: 29, 1 or 3; (b) a nucleic acid molecule comprising or consisting of the nucleotide sequence of SEQ ID NO: 30, 2 or 4; (c) a nucleic acid molecule encoding a RNA-guided DNA endonuclease the amino acid sequence of which is at least 90 %, preferably at least 92 %, and most preferably at least 95 % identical to the amino acid sequence of (a); (d) a nucleic acid molecule comprising or consisting of a nucleotide sequence which is at least 90 %, preferably at least 92 %, and most preferably at least 95 % identical to the nucleotide sequence of (b); (e) a nucleic acid molecule which is degenerate with respect to the nucleic acid molecule of (d); or (f) a nucleic acid molecule corresponding to the nucleic acid molecule of any one of (a) to (d) wherein T is replaced by U.