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(54) Title: NUCLEIC ACIDS OF *PICHIA PASTORIS* AND USE THEREOF FOR RECOMBINANT PRODUCTION OF PROTEINS(57) Abstract: The present invention provides the genome sequence of *Pichia pastoris* and manually curated annotation of protein-coding genes. The invention provides novel nucleic acids, proteins, and related expression vectors useful for genetic engineering of methylo trophic yeast strains, as well as engineered methylotrophic yeast strains particularly *Pichia pastoris*, and use thereof for recombinant production of heterologous proteins including glycoproteins suitable for use in mammals including humans.