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(54) Title: NOVEL CYTOCHROME P450 POLYPEPTIDE WITH INCREASED ENZYMATIC ACTIVITY

(57) Abstract: The present invention pertains to an isolated P450 enzyme comprising or consisting of an amino acid sequence at least 80% identical to SEQ ID NO: 1, wherein said sequence comprises a threonine at position corresponding to position 225 and/or an aspartic acid mutation at position corresponding to position 289. The invention also concerns an isolated nucleic acid comprising a sequence encoding said enzyme, a vector comprising said nucleic acid, and a host cell containing said nucleic acid or said vector. Methods for preparing said enzyme and methods for producing steroid hormone precursors using the enzyme or the host cells featured in the invention are also provided.

