

Claims:

1. A yeast cell of the *Komagataella* genus comprising an orthologous promoter of a methylotrophic yeast cell or a variant thereof inducible by derepression, wherein the orthologous promoter is an orthologous formate dehydrogenase (FMD) promoter of a methylotrophic yeast cell.

2. The yeast cell according to claim 1, wherein the orthologous promoter is inducible with methanol.

3. The yeast cell according to claim 1 or 2, wherein the orthologous promoter is operably linked to a nucleic acid molecule coding for a heterologous or homologous polypeptide.

4. The yeast cell according to claim 3, wherein the heterologous or homologous polypeptide comprises a signal peptide, in particular a secretion signal peptide.

5. The yeast cell according to any one of claims 1 to 4, wherein the orthologous promoter originates from a methylotrophic yeast cell selected from the group consisting of the genre *Hansenula*, *Candida*, *Komagataella* and *Pichia*.

6. The yeast cell according to any one of claims 1 to 5, wherein the methylotrophic yeast cell is selected from the group consisting of *Hansenula polymorpha*, *Candida boidinii*, *Pichia methanolica*, *Komagataella pastoris*, *Komagataella phaffii*, *Komagataella populi*, *Komagataella pseudopastoris*, *Komagataella ulmi* and *Komagataella* sp. 11-1192.

7. The yeast cell according to any one of claims 1 to 6, wherein the orthologous promoter and optionally the nucleic acid molecule coding for the heterologous or homologous polypeptide in the genome and also operably linked to the promoter is optionally present in the genome or as an extrachromosomal nucleic acid construct.

8. The yeast cell according to any one of claims 1 to 7, wherein the orthologous promoter comprises nucleic acid sequence SEQ ID No. 1 or a variant thereof.

9. The yeast cell according to claim 8, wherein the variant of SEQ ID No. 1 comprises nucleic acid sequence SEQ ID No. 27:

AATGTATCTAAACGCAAACTCCGAGCTGGAAAAATGTTACCGGCGATGCGCGGACAATTTAGAG
GCGGCGAX₁TCAAGAAACACCTGCTGGGCGAGCAGTCTGGAGCACAGTCTTCGATGGGCCCCGAGA
TCCCACCGCGTTTCTGGGTACCGGGACGTGAGGCAGCGCGACATCCATCAAATATACCAGGCGC
CAACCGAGTCTCTCGGAAAACAGCTTCTGGATATCTTCCGCTGGCGGCGCAACGACGAATAATA
GTCCCTGGAGGTGACGGAATATATATGTGTGGAGGGTAAATCTGACAGGGTGTAGCAAAGGTAA
TATTTTCCTAAACATGCAATCGGCTGCCCCGCX₂ACGGGAAAAAGAATGACTTTGGCACTCTTC
ACCAGAGTGGGGTGTCCCGCTCGTGTGTGCAAATAGGCTCCCACTGGTCACCCCGGATTTTGCA
GAAAAAX₃AGCAAGTTCCGGGGTGTCTCACTGGTGTCCGCCAATAAGAGGAGCCGGCAGGCACGG
AGTCTACATCAAGCTGTCTCCGATACACTCGACTACCAX₄CCGGGTCTCTCX₅X₆X₇X₈X₉X₁₀X₁₁X₁₂X₁₃X₁₄X₁₅X₁₆X₁₇X₁₈CACX₁₉,

wherein X₁ is adenine or no nucleotide, X₂ is adenine or guanine, X₃ is cytosine or thymine, X₄ is thymine or guanine, X₅ is adenine or cytosine, X₆ is guanine or cytosine, X₇ is adenine or cytosine, X₈ is guanine or cytosine, X₉ is adenine, guanine or cytosine, X₁₀ is guanine or cytosine, X₁₁ is guanine or cytosine, X₁₂ is guanine or cytosine, X₁₃ is guanine or cytosine, X₁₄ is adenine or cytosine, X₁₅ is adenine or cytosine, X₁₆ is thymine or cytosine, X₁₇ is guanine or cytosine, X₁₈ is guanine or cytosine, X₁₉ is a nucleic acid sequence selected from the group consisting of TATAAATACCGCCTCCTTGCGCTCTCTGCCTTCATCAATCAAATC (SEQ ID No. 28), TATATAAACTGGTGATAATTCCTTCGTTCTGAGTTCCATCTCATACTCAAATA-TATTAAAACTACAACA (SEQ ID No. 29), TATAAATACAAGACGAG-TGCGTCCTTTTCTAGACTCACCCATAAACAAATAATCAATAAAT (SEQ ID No. 30) and TATAAATACTGCCTACTTGTCTCTATTCTTCATCAATCACATC (SEQ ID No. 31).

10. The yeast cell according to claim 8 or 9, wherein the variant of SEQ ID No. 1 comprises a nucleic acid sequence selected from the group consisting of SEQ ID No. 35, SEQ ID No. 36, SEQ ID No. 37, SEQ ID No. 38, SEQ ID No. 39, SEQ ID No. 40, SEQ ID No. 41, SEQ ID No. 42, SEQ ID No. 43, SEQ ID No. 44, SEQ ID No. 45, SEQ ID No. 46, SEQ ID No. 47, SEQ ID No. 48, SEQ ID

No. 49, SEQ ID No. 50, SEQ ID No. 51, SEQ ID No. 52, SEQ ID No. 53, SEQ ID No. 54, SEQ ID No. 55 and SEQ ID No. 56, preferably selected from the group consisting of SEQ ID No. 35, SEQ ID No. 37, SEQ ID No. 39, SEQ ID No. 40, SEQ ID No. 44, SEQ ID No. 51, SEQ ID No. 52, SEQ ID No. 54, SEQ ID No. 55 and SEQ ID No. 56, more preferably selected from the group consisting of SEQ ID No. 35, SEQ ID No. 39, SEQ ID No. 44, SEQ ID No. 51, SEQ ID No. 52, SEQ ID No. 54, SEQ ID No. 55 and SEQ ID No. 56.

11. A method for producing a heterologous polypeptide comprising the step of culturing a yeast cell according to any one of claims 1 to 10.

12. The method according to claim 11, wherein during the culturing the expression of the heterologous polypeptide is induced or its expression rate is increased by derepressing conditions.

13. The method according to claim 11, wherein during the culturing under derepressing conditions, methanol or an alternative inductor is added.