

Enhanced production of antithrombotic hirudin by coexpression of Pdi1 and Ero1 in recombinant *Saccharomyces cerevisiae*

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Synergistic cooperation of protein disulfide isomerase (Pdi1) and Ero1, ER-resident molecular chaperones, was examined to increase antithrombotic hirudin production in recombinant *Saccharomyces cerevisiae*. In batch culture, coexpression of Pdi1 and/or Ero1 increased hirudin productivity approximately twofold and simultaneous coexpression of both fold-catalyzing chaperones had synergistic effect on hirudin production. Maximum hirudin concentration of 1.1 g/L was obtained from fed-batch cultivation of recombinant *S. cerevisiae* strain harboring ten copies of *GALI10* promoter-driven hirudin expression cassette and *GALI-10* promoter-driven Pdi1/Ero1 expression cassette in the genome.

References

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