Culturing Escherichia coli cells

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Organisation

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SCOPE OF THE METHOD

The Method relates to	Other: Recombinant DNA technology
The Method is situated in	Basic Research, Regulatory use - Routine production
Type of method	In vitro - Ex vivo

DESCRIPTION

Method keywords

bacterial cells
cell culture
protein expression
E. coli
prokaryote

Scientific area keywords

microbiology
biotechnology
Recombinant DNA technology

Method description

E. coli is one of the organisms of choice for the production of recombinant proteins. DH5 alpha cells are commonly used for maintenance, propagation and mutation, whilst BL21(DE3) and C43(DE3) are mainly used for expression of the transgene. The advantage of C43(DE3) is that is used to produce proteins that are expressed poorly in BL21 (DE3) or that are very toxic to the host organism. All strains can be cultured in Lysogeny Broth (LB) medium or LB agar plates with an appropiate antibiotic for positive selection of the clones. For induction of protein expression, isopropyl-b-thiogalactoside (IPTG) in a concentration of 0.2 mM - 1 mM can be used. In case you have a problems with leaky expression, 1 % w/v glucose can be added to the LB medium for excellent

growth of the bacteria. Transformation of the cells can be achieved by heat shock or electroporation.
Hi?n nay, có r?t nhi?u trang th? thao bóng ?á tr?c tuy?n, nh?ng ?a s? ??u có nh?ng qu?ng cáo ho?c ch?t l??ng ko cao ho?c phát l?u, Chúng tôi socolive v?i b?n quy?n tr?c ti?p phát sóng tr?c ti?p , h?a h?n s? cung c?p cho các b?n nh?ng tr?n bóng ?á h?p d?n nh?txem bóng ?á tr?c tuy?n
Kênh c?a chúng tôi luôn luôn thân thi?n v?i t?t c? m?i ng??i, mitomcung c?p nh?ng tr?n ??u tr?c ti?p c?a Vi?t Nam và toàn c?u, v?i video Full HD , ko lag ko gi?t, ??m b?o cung c?p cho b?n nh?ng giây phút bóng ?á tuy?t v?i nh?t
???c xem là m?t trang bóng ?á hàng ??u Vi?t Nam, chúng tôi cung c?p cho khán gi? t?t c? các tr?n ??u , tr?c ti?p t?i hi?n tr??ng, b?n có th? ?ón xem t?t c? các gi?i ??u t?i ?ây xoilac , n?i mà b?n có th? th?a mãn ni?m ?am mê v?i bóng ?á mà không lo b? dán ?o?n vì ch?t l??ng trang kém
? ?ây chúng tôi cung c?p nh?ng tr?n bóng h?p d?n nh?t , v?i hình ?nh s?c nét, trang web thân thi?n v?i t?t c? m?i ng??i Vi?t Nam, hãy nh?n vào và ??t 90p l?ch cho tr?n ??u mà b?n yêu thích nào

Lab equipment

Biosafety cabinet;
Bunsen burner;
Petri dishes.

Method status

Still in development
History of use
Internally validated

PROS, CONS & FUTURE POTENTIAL

Advantages

Fast growth kinetics (doubling time 20 mins);
High cell density cultures are easily achieved;
Readily available and inexpensive components for media;
Easy transformation.

Challenges

No post-translational modifications (i.e. prokaryote).

Future & Other applications

Every researcher that will need a prufied protein can obtain it in a recombinant form.

REFERENCES, ASSOCIATED DOCUMENTS AND OTHER INFORMATION

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