

DAFTAR PUSTAKA

- Alupoaei, C. E. and García-Rubio, L. H. 2004. 'Growth Behavior of Microorganisms Using UV-Vis Spectroscopy: Escherichia coli', *Biotechnology and Bioengineering*, 86(2), pp. 163–167. doi: 10.1002/bit.20001.
- Andrady, A. L. and Neal, M. A. 2009. 'Applications and societal benefits of plastics', *Philosophical Transactions of the Royal Society B: Biological Sciences*, 364(1526), pp. 1977–1984. doi: 10.1098/rstb.2008.0304.
- Austin, H. P. Austin, H. P., Allen, M. D., Donohoe, B. S., Rorrer, N. A., Kearns, F. L., Silveira, R. L., Pollard, B. C., Dominick, G., Duman, R., Omari, K. E., Mykhaylyk, V., Wagner, A., Michener, W. E., Amore, A., Skaf, M. S., Crowley, M. F., Thorne, A. W., Johnson, C. W., Lee, W. H., McGeehan, J. E., Beckham, G. T. 2018. 'Characterization and engineering of a plastic-degrading aromatic polyesterase', *Proceedings of the National Academy of Sciences of the United States of America*, 115(19), pp. E4350–E4357. doi: 10.1073/pnas.1718804115.
- Bath, A. J., Milsom, S. E., Gormley, N. A., and Halford, S. E. 2002. 'Many type IIs restriction endonucleases interact with two recognition sites before cleaving DNA'. *J Biol Chem*, 277(6), pp. 4024–4033. doi: 10.1074/jbc.M108441200.
- Bharanikumar, R., Premkumar, K. A. R. and Palaniappan, A. 2018. 'PromoterPredict: Sequence-based modelling of Escherichia coli r70 promoter strength yields logarithmic dependence between promoter strength and sequence', *PeerJ*, 2018(11), pp. 1–15. doi: 10.7717/peerj.5862.
- Chao, R., Yuan, Y., and Zhao, H. 2015. 'Recent advances in DNA assembly technologies'. *FEMS Yeast Res*, 15(1), pp. 1–9. doi: 10.1111/1567-1364.12171
- Chappell, J., Jensen, K. and Freemont, P. S. 2013. 'Validation of an entirely in vitro approach for rapid prototyping of DNA regulatory elements for synthetic biology', *Nucleic Acids Research*, 41(5), pp. 3471–3481. doi: 10.1093/nar/gkt052.
- Danso, D., Schmeisser, C., Chow, J., Zimmermann, W., Wei, R., Leggewie, C., Li, X., Hazen, T., Streit, W. R. 2018. 'New insights into the function and global distribution of polyethylene terephthalate (PET)-degrading bacteria and enzymes in marine and terrestrial metagenomes', *Applied and Environmental Microbiology*. American Society for Microbiology, 84(8). doi: 10.1128/AEM.02773-17.
- Engler, C., Gruetzner, R., Kandzia, R., and Marillonnet, S. 2009. 'Golden gate shuffling: A one-pot DNA shuffling method based on type IIs restriction enzymes', *PLoS ONE*, 4(5). doi: 10.1371/journal.pone.0005553.
- Engler, C., Youles, M., Gruetzner, R., Ehnert, T. M., Werner, S., Jones, J. D. G., Patron, N. J., and Marillonnet, S. 2014. 'A Golden Gate modular cloning toolbox for plants', *ACS Synthetic Biology*, 3(11), pp. 839–843. doi: 10.1021/sb4001504.
- Engler, C., Kandzia, R. and Marillonnet, S. 2008. 'A one pot, one step, precision cloning method with high throughput capability', *PLoS ONE*, 3(11). doi:

- 10.1371/journal.pone.0003647.
- Fakruddin, M., Mazumdar, R. M., Mannan, B. K. S., Chowdhury, A., Hossain, M. N. 2013. 'Critical Factors Affecting the Success of Cloning, Expression, and Mass Production of Enzymes by Recombinant E. coli', *ISRN Biotechnology*, 2013(3), pp. 1–7. doi: 10.5402/2013/590587.
- Gibson, D. G., Young, L., Chuang, R., Venter, J. C., Hutchison III, C. A., and Smith, H. O. 2009. 'Enzymatic assembly of DNA molecules up to several hundred kilobases'. *Nature Methods*, 6(5), pp. 343 - 345. doi: 10.1038/nmeth.1318.
- Glick, B. R. and Whitney, G. K. 1987. 'Factors affecting the expression of foreign proteins in Escherichia coli', *Journal of Industrial Microbiology*, 1(5), pp. 277–282. doi: 10.1007/BF01569305.
- Han, X., Liu, W., Huang, J. W., Ma, J., Zheng, Y., Ko, T. P., Xu, L., Cheng, Y. S., Chen, C. C., Guo, R. T. 2017. 'Structural insight into catalytic mechanism of PET hydrolase', *Nature Communications*. Springer US, 8(1). doi: 10.1038/s41467-017-02255-z.
- Hu, Y., Zhao, N., Gan, T., Duan, J., Yu, H. J., Meng, D., Liu, J., Liu, W. 2017. 'Analytic Method on Characteristic Parameters of Bacteria in Water by Multiwavelength Transmission Spectroscopy', *Journal of Spectroscopy*, 2017. doi: 10.1155/2017/4039048.
- Hui, C. Y., Guo, Y., Zhang, W., and Huang, X. Q. 2018. 'Rapid monitoring of the target protein expression with a fluorescent signal based on a dicistronic construct in Escherichia coli', *AMB Express*. Springer Berlin Heidelberg, 8(1). doi: 10.1186/s13568-018-0612-5.
- Invitrogen. 2006. 'Library Efficiency DH5α Competent Cells'. Diakses di: <https://assets.thermofisher.com/TFS-Assets/LSG/manuals/18263012.pdf>. Diakses pada 10 Juni 2021.
- Iverson, S.V., Haddock, T.L., Beal, J., Densmore, D.M. 2016. CIDAR MoClo: Improved MoClo Assembly Standard and New E. coli Part Library Enable Rapid Combinatorial Design for Synthetic and Traditional Biology. *ACS Synth Biol*, 5, pp. 99–103. doi: 10.1002/bit.25814.
- Karuniastuti, N. (2013) 'Bahaya Plastik terhadap Kesehatan dan Lingkungan', *Swara Patra: Majalah Pusdiklat Migas*, 3(1), pp. 6–14. Available at: <http://ejurnal.ppsdmmigas.esdm.go.id/sp/index.php/swarapatra/article/view/43/65>.
- Kelly, J. R., Rubin, A. J., Davis, J. H., Ajo-Franklin, C. M., Cumbers, J., Czar, M. J., de Mora, K., Gliebberman, A. L., Monie, D. D., and Endy, D. 2009. 'Measuring the activity of BioBrick promoters using an in vivo reference standard', *Journal of Biological Engineering*, 3, pp. 1–13. doi: 10.1186/1754-1611-3-4.
- Knight, I., and Monroe, J. 1996. 'Transformation of E. coli'. Diakses di: http://csmbio.csm.jmu.edu/biology/courses/bio480_580/mblab/comp.html. Diakses pada 16 Juni 2021.
- Liu, B., He, L., Wang, L., Li, T., Li, C., Liu, H., Luo, Y., and Bao, R. 2018. 'Protein crystallography and site-direct mutagenesis analysis of the poly(Ethylene terephthalate) hydrolase petase from Ideonella sakaiensis', *ChemBioChem*, 19(14), pp. 1471–1475. doi: 10.1002/cbic.201800097.
- Narancic, T. and O'Connor, K. E. 2019. 'Plastic waste as a global challenge: Are

- biodegradable plastics the answer to the plastic waste problem?', *Microbiology (United Kingdom)*. Microbiology Society, pp. 129–137. doi: 10.1099/mic.0.000749.
- NEB. 2021. 'Restriction Enzyme Troubleshooting Guide'. Diakses di: <https://international.neb.com/tools-and-resources/troubleshooting-guides/restriction-enzyme-troubleshooting-guide>. Diakses pada 18 Juni 2021.
- Neubauer, P., Lin, H. Y. and Mathiszik, B. 2003. 'Metabolic load of recombinant protein production: Inhibition of cellular capacities for glucose uptake and respiration after induction of a heterologous gene in Escherichia coli', *Biotechnology and Bioengineering*, 83(1), pp. 53–64. doi: 10.1002/bit.10645.
- NZYTech. 2019. 'Troubleshooting – Restriction Enzymes'. Diakses di: https://www.nzytech.com/wp-content/uploads/2019/12/conventionalnzyres_trictionenzymes_troubleshooting_v1901.pdf. Diakses pada 18 Juni 2021.
- Pérez-González, A., Kniewel, R., Veldhuizen, M., Verma, H. K., Navarro-Rodríguez, M., Rubio, L. M., and Caro, E. 2017. 'Adaptation of the GoldenBraid modular cloning system and creation of a toolkit for the expression of heterologous proteins in yeast mitochondria', *BMC Biotechnology*, 17(1), pp. 1–11. doi: 10.1186/s12896-017-0393-y.
- Rahmen, N., Fulton, A., Ihling, N., Magni, M., Jaeger, K. E., and Büchs, J. 2015. 'Exchange of single amino acids at different positions of a recombinant protein affects metabolic burden in Escherichia coli', *Microbial Cell Factories*, 14(1), pp. 1–18. doi: 10.1186/s12934-015-0191-y.
- Ringquist, S., Shinedling, S., Barrick, D., Green, L., Binkley, J., Stormo, G. D., and Gold, L. 1992. 'Translation initiation in Escherichia coli: sequences within the ribosome-binding site', *Molecular Microbiology*, 6(9), pp. 1219–1229. doi: 10.1111/j.1365-2958.1992.tb01561.x.
- Rosano, G. L. and E. A. Ceccarelli. 2014. Recombinant protein expression in *Escherichia coli*: Advances and challenges. *Frontiers in Microbiology*. 1–17.
- Sarrion-Perdigones, A., Falconi, E. E., Zandalinas, S. I., Juárez, P., Fernández-del-Carmen, A., Granell, A., and Orzaez, D. 2011. 'GoldenBraid: An iterative cloning system for standardized assembly of reusable genetic modules', *PLoS ONE*, 6(7). doi: 10.1371/journal.pone.0021622.
- Sarrion-Perdigones, A. Vazquez-Vilar, M., Palací, J., Castelijns, B., Forment, J., Ziarsolo, P., Blanca, J., Granell, A., and Orzaez, D. 2013. 'Goldenbraid 2.0: A comprehensive DNA assembly framework for plant synthetic biology', *Plant Physiology*, 162(3), pp. 1618–1631. doi: 10.1104/pp.113.217661.
- Shaner, N. C., Campbell, R. E., Steinbach, P. A., Giepmans, B. N. G., Palmer, A. E., and Tsien, R. Y. 2004. 'Improved monomeric red, orange and yellow fluorescent proteins derived from Discosoma sp. red fluorescent protein', *Nature Biotechnology*, 22(12), pp. 1567–1572. doi: 10.1038/nbt1037.
- Shetty, R. P., Endy, D. and Knight, T. F. 2008. 'Engineering BioBrick vectors from BioBrick parts', *Journal of Biological Engineering*, 2, pp. 1–12. doi: 10.1186/1754-1611-2-5.
- Shimada, T., Yamazaki, Y., Tanaka, K., and Ishihama, A. 2014. 'The Whole Set of Constitutive Promoters Recognized by RNA Polymerase RpoD Holoenzyme of Escherichia coli', *PLoS ONE*, 9(6): e100908. <https://doi.org/10.1371/journal.pone.0100908>

- Shintani, M., Sanchez, Z. K. and Kimbara, K. 2015. 'Genomics of microbial plasmids: Classification and identification based on replication and transfer systems and host taxonomy', *Frontiers in Microbiology*, 6(MAR), pp. 1–16. doi: 10.3389/fmicb.2015.00242.
- Sinha, V., Patel, M. R. and Patel, J. V. 2010. 'Pet waste management by chemical recycling: A review', *Journal of Polymers and the Environment*, 18(1), pp. 8–25. doi: 10.1007/s10924-008-0106-7.
- Swartz, J. R. 2001. 'Advances in Escherichia coli production of therapeutic proteins', *Current Opinion in Biotechnology*, 12(2), pp. 195–201. doi: 10.1016/S0958-1669(00)00199-3.
- Tanasupawat, S., Takehana, T., Yoshida, S., Hiraga, K., and Oda, K. 2016. 'Ideonella sakaiensis sp. nov., isolated from a microbial consortium that degrades poly(ethylene terephthalate)', *International Journal of Systematic and Evolutionary Microbiology*. Microbiology Society, 66(8), pp. 2813–2818. doi: 10.1099/ijsem.0.001058.
- ThermoFisher Scientific. 2021. '7 Common Issues with Restriction Digestion Reactions and How to Avoid Them'. Diakses di: <https://www.thermofisher.com/id/en/home/brands/thermo-scientific/molecular-biology/molecular-biology-learning-center/molecular-biology-resource-library/spotlight-articles/7-common-issues-with-restriction-digestion-reactions-and-how-to-avoid-them.html>. Diakses pada 18 Juni 2021.
- Trigoso, Y. D., Evans, R. C., Karsten, W. E., and Chooback, L. 2016. 'Cloning, expression, and purification of histidine-tagged Escherichia coli dihydrodipicolinate reductase', *PLoS ONE*, 11(1), pp. 4–9. doi: 10.1371/journal.pone.0146525.
- Ventura, M., Canchaya, C., Tauch, A., Chandra, G., Fitzgerald, G. F., Chater, K. F., and van Sinderen, D. 2007. 'Genomics of Actinobacteria: Tracing the Evolutionary History of an Ancient Phylum', *Microbiology and Molecular Biology Reviews*, 71(3), pp. 495–548. doi: 10.1128/mmbr.00005-07.
- Weber, E., Engler, C., Gruetzner, R., Werner, S., and Marillonnet, S. 2011. 'A modular cloning system for standardized assembly of multigene constructs', *PLoS ONE*, 6(2). doi: 10.1371/journal.pone.0016765.
- Werner, S., Engler, C., Weber, E., Gruetzner, R., and Marillonnet, S. 2012. 'Fast track assembly of multigene constructs using Golden Gate cloning and the MoClo system'. *Bioengineered*, 3:1, pp. 38-43. doi: 10.4161/bbug.3.1.18223.
- Yoshida, S., Hiraga, K., Takehana, T., Taniguchi, I., Yamaji, H., Maeda, Y., Toyohara, K., Miyamoto, K., Kimura, Y., and Oda, K. 2016. 'A bacterium that degrades and assimilates poly(ethylene terephthalate)', *Science*. American Association for the Advancement of Science, 351(6278), pp. 1196–1199. doi: 10.1126/science.aad6359.
- Zhu, Z., Samuelson, J. C., Zhou, J., Dore, A., and Xu, S. 2004. 'Engineering Strand-specific DNA Nicking Enzymes from the Type IIS Restriction Endonucleases BsaI, BsmBI, and BsmAI', *J. Mol. Biol.*, 337, pp. 573 - 583. doi:10.1016/j.jmb.2004.02.003