Engineered CHO cells for production of diverse, homogeneous glycoproteins

Production of glycoprotein therapeutics in Chinese hamster ovary (CHO) cells is limited by the cells' generic capacity for N-glycosylation, and production of glycoproteins with desirable homogeneous glycoforms remains a challenge. We conducted a comprehensive knockout screen of glycosyltransferase genes controlling N-glycosylation in CHO cells and constructed a design matrix that facilitates the generation of desired glycosylation, such as human-like alpha 2,6-linked sialic acid capping. This engineering approach will aid the production of glycoproteins with improved properties and therapeutic potential.

General information
Publication status: Published
Organisations: Department of Systems Biology, Novo Nordisk Foundation Center for Biosustainability, Glyco-Engineering of CHO, Technical University of Denmark, Novo Nordisk A/S, University of Copenhagen
Number of pages: 3
Pages: 842-844
Publication date: 2015
Peer-reviewed: Yes

Publication information
Journal: Nature Biotechnology
Volume: 33
Issue number: 8
ISSN (Print): 1087-0156
Ratings:
BFI (2015): BFI-level 2
Scopus rating (2015): CiteScore 11.88 SJR 18.263 SNIP 5.469
Web of Science (2015): Impact factor 43.113
Web of Science (2015): Indexed yes
Original language: English
DOIs:
10.1038/nbt.3280
Source: FindIt
Source ID: 275505807
Research output: Contribution to journal › Journal article – Annual report year: 2015 › Research › peer-review