

CLAIMS

1. A host cell that comprises a nucleic acid encoding a modified enzyme of the fucosylation pathway, wherein the modified enzyme is derived from GDP-mannose 4,6-dehydratase (GMD) and α -1,6-fucosyltransferase (FUT8), the nucleic acid is selected from the group consisting of SEQ ID NOs: 3, 5, 7, 9, 11, 15 and any combination thereof, the modified enzyme reduces or inhibits the activity of the wild-type enzyme, from which the modified enzyme is derived, in the host cell.
2. The host cell according to claim 1, wherein the modified enzyme has an amino acid sequence selected from the group consisting of SEQ ID NOs: 4, 6, 8, 10, 12, 16, and any combination thereof.
3. The host cell according to claim 1, wherein the modified enzyme inhibits or reduces fucosylation in the host cell.
4. The host cell according to claim 1, wherein less than 10% of the proteins produced in the cell are fucosylated.
5. The host cell according to claim 1 further comprising a nucleic acid encoding an antibody.
6. The host cell according to claim 5, wherein the antibody is expressed in the cell as an afucosylated antibody.
7. A use of a host cell according to claim 1 for the manufacture of an afucosylated antibody.