

Non-fucosyl G2 N-Glycan

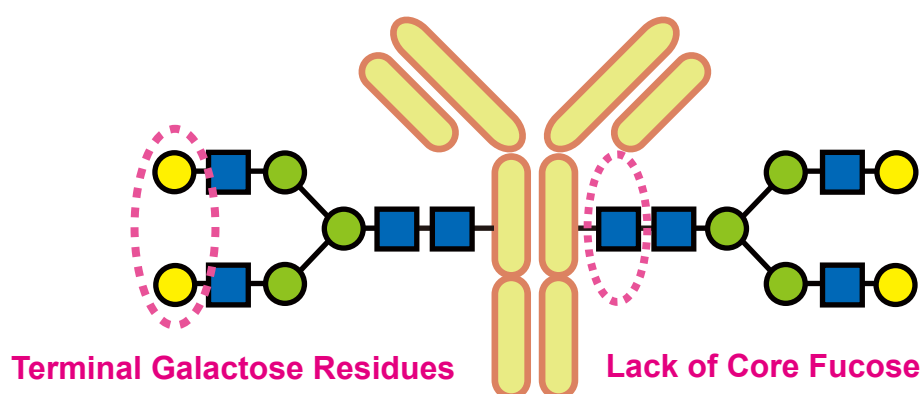
Expected as a High-functional Glycoform for Therapeutic Antibody

| | |
|--|----------------------|
| G2-peptide | 5mg [G0466] |
| G2 Glycan | 1mg [G0487] |
| G2 2AB | 500pmol/vial [G0493] |
| Nonasaccharide-β-pNP | 1mg [N1211] |

G2-peptide is practically available as a structure-defined glycan donor in the "enzymatic *N*-glycan remodeling technology" to convert glycosylation of glycoprotein from heterogeneous non-core fucosylated biantennary *N*-glycans to homogenous G2 *N*-glycan.

By the US National Institutes of Health (NIH) and the JP National Institute of Health Sciences (NIHS) and some others, it has been reported that antibodies possessing "non-core fucosyl G2 glycoform" show functional improvements in physiological phenomena such as antibody-dependent cellular cytotoxicity (ADCC) activity, complement-dependent cytotoxicity (CDC) activity, and anti-inflammatory effect. In recent years, "non-fucosyl G2 *N*-glycan" has been an attracting glycan structure in biopharmaceutical fields.

Non-fucosylated G2-type Glycoform



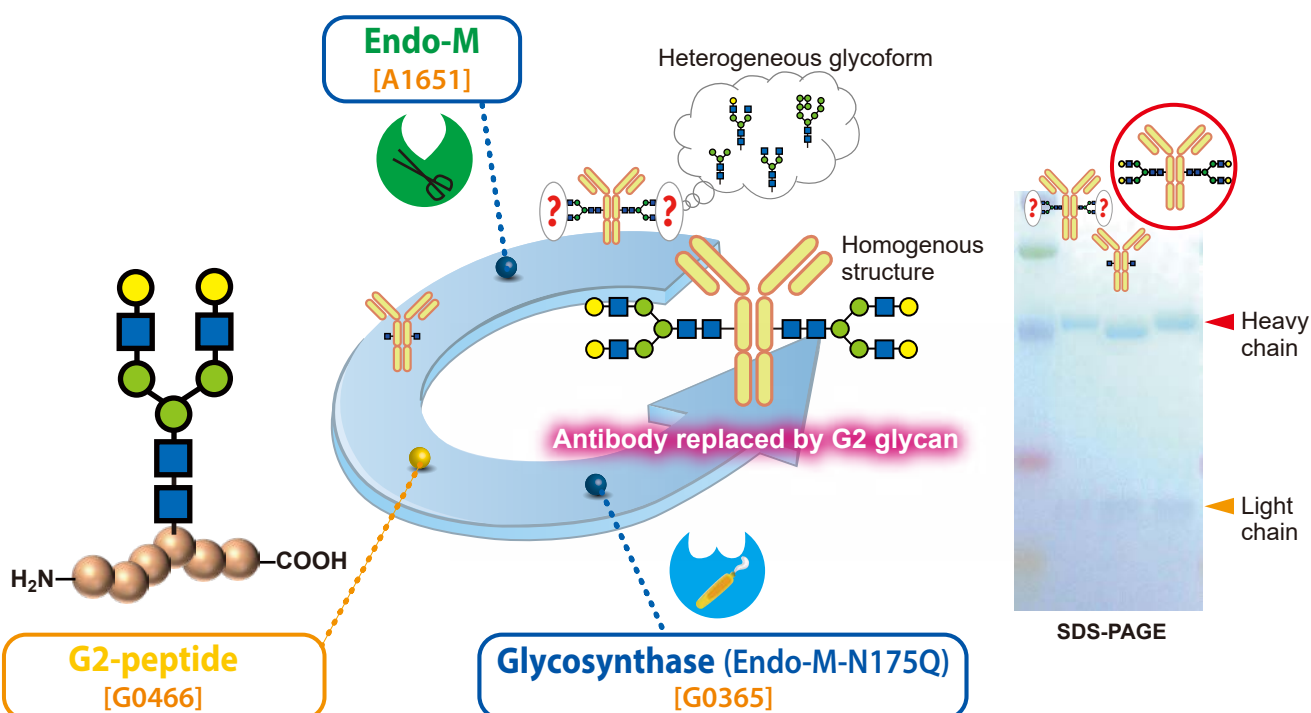
Physiological functions reported to be improved by this specific glycoform

- Antibody-dependent cell-mediated cytotoxicity (ADCC) activity
- Complement-dependent cytotoxicity (CDC) activity
- Anti-inflammatory activity

Practical Example

It is known that the effector activities of antibody drugs are greatly affected by the N-glycan structure of the Fc region, and in recent years, knowledge on the glycoforms of IgG has been accumulating.

Not only the lack of the core fucose but also the addition of terminal β -galactose residues at the non-reducing end enhances ADCC and CDC effects of IgG. By the N-glycan remodeling technology with Endo-M mutant (Glycosynthase) and G2-peptide, we succeeded to incorporate the structure-defined non-core fucosyl G2 N-glycan structure into a therapeutic antibody drug.



Related Products

Structure-defined glycan donors

Sialylglycopeptide (= SGP)
Disialyloctasaccharide

10mg [S0523]
10mg [D4065]

Enzymes for glycan-remodeling

Endo-M (= *endo*- β -N-Acetylglucosaminidase)
Glycosynthase (= Endo-M-N175Q)

1 vial [A1651]
1 vial [G0365]

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