

ABSTRACT

MODIFYING GLYCOPROTEIN PRODUCTION IN PLANTS

A method for synthesizing a protein of interest with a modified N-glycosylation profile within a plant, a portion of a plant, or a plant cell is provided. The method comprises co-expressing within a plant a nucleotide sequence encoding a first nucleotide sequence encoding a hybrid protein (GNTI-GaIT) comprising a CTS domain of N-acetylglucosaminyl transferase (GNTI) fused to a catalytic domain of beta-1,4galactosyltransferase (GaIT), the first nucleotide sequence operatively linked with a first regulatory region that is active in the plant, and a second nucleotide sequence for encoding the protein of interest, the second nucleotide sequence operatively linked with a second regulatory region that is active in the plant. The first and second nucleotide sequences are co-expressed to synthesize a protein of interest comprising glycans with the modified N-glycosylation profile within the plant, the portion of the plant, or the plant cell.

Fig. 1A