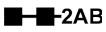
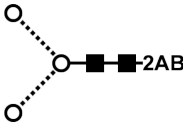
Guide to the abbreviations used to identify 2AB labelled N-glycans

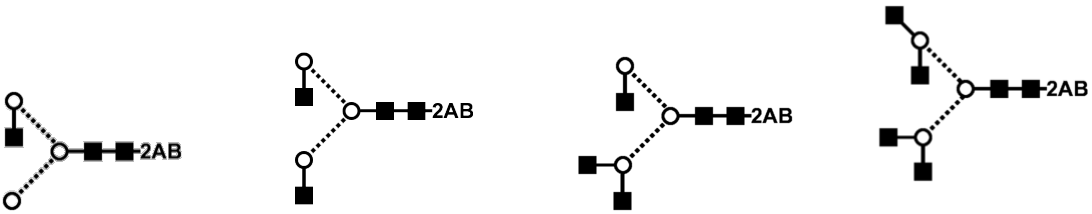
As all N-glycans have 2 core GlcNAcs, these are assumed in all structures.



All complex glycans have an additional 3 mannose and this is assumed in all complex structures.



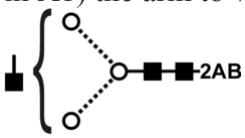
The number of GlcNAcs as antenna are represented by **A1, A2, A3 & A4**.



A1[6] **A2** **A3** **A4**

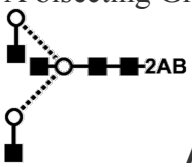
Square brackets indicate which arm the antenna is on, so in the example above, A1[6], the GlcNAc is on the Manα1-6 arm.

Where the monosaccharide is next to a bracket, rather then shown attached (as below in A1) the arm to which the sugar is attached has not been identified.



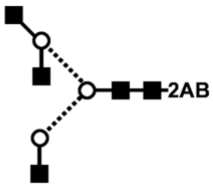
A1

A bisecting GlcNac is indicated by a **B** following the antenna.



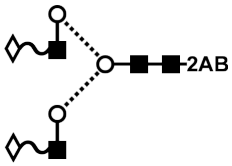
A2B

For the basic antennary structures the linkages shown above (i.e. GlcNAc β1-2 to both mannose, with a GlcNAc β1-4 to the α1-3 mannose arm for A3 and an additional GlcNAc β1-6 linked to the α1-6 mannose for A4) are the assumed structures. Where alternative linkage has been shown, for example A3(2,2,6) has 2 of the GalNAcs β1-2 linked and one β1-6 linked, the numbers in parentheses indicates the linkages.

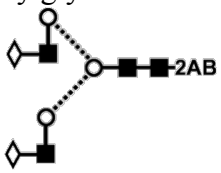


A3(2,2,6)

For the galactoses beta linked (**G**) to the antenna the number in parentheses indicates the linkage position (3 indicated β1-3; 4 indicated β1-4), whilst the number following the G (or after the parentheses following the G) indicates the number of galactoses. So A2G2 is a biantennary glycan with 2 galactoses in an unknown linkage position, whilst A2G(4)2 is a biantennary glycan with 2 galactoses linked β1-4 to the GlcNAcs

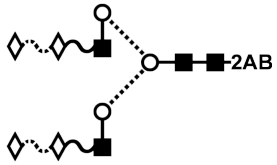


A2G2



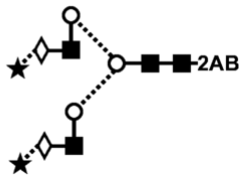
A2G(4)2

Where there are alpha gals these are abbreviated as **Ga**. The structure A2G2Ga2 is a biantennary with alpha galactoses attached to the beta galactoses.



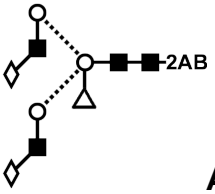
A2G2Ga2

Sialic acids are indicated by an **S**. The structure A2G(4)2S(3)2 has two alpha 2-3 linked sialic acids attached to the beta 1-4 linked galactoses.



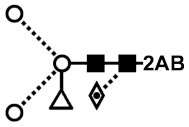
A2G(4)2S(3)2

Xylose beta 1-2 linked to the beta mannose is indicated by an **X**.

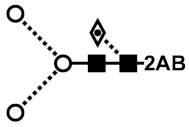


A2XG(3)2

Alpha linked fucose is indicated by an **F**. Where an F is written at the start of a structure this is a core fucose linked either α1-3 or α1-6 to the core GlcNAc.

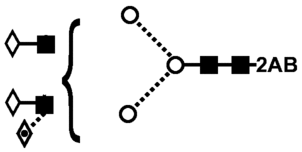


F(3)M3X



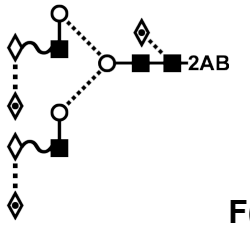
F(6)M3

Where the fucose is linked to an outer arm it is written following the A, it is attached to the GlcNAc



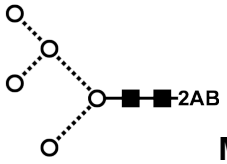
A2F(3)1G(4)2

Whereas if it is written after the galactoses, then it is attached to the galactose.



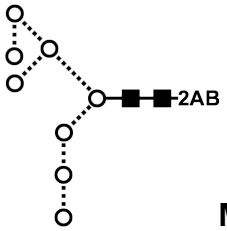
F(6)A2G2F(2)2

For mannose structures the number of mannoses is indicated after an **M**.

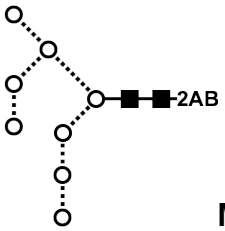


M5

Where there are a number of different isomers D1, D2 & D3 is used to indicate that the mannose is attached to the top, middle or bottom arm.



M8D1,D3



M8D2,D3