

Description of Additional Supplementary Information

Supplementary Movie 1. Predicted docking of the 3C8 TCR onto CD1c presenting GD3.

CD1c- β 2m complex (blue and yellow respectively) presenting monoacylglycerol (MAG, yellow) and ganglioside GD3 (pink) in the A' and F' pockets respectively. Docking of the 3C8 TCR, with the α - and β -chains coloured in orange and purple, respectively. TCR docking prediction based on alignment against ternary crystal structure of the 3C8 TCR-CD1c-MAG complex (PDB ID 6C09).

Supplementary Movie 2. Morphed structure of CD1c revealing the protein's flexibility with and without the presence of GD3.

Crystal structure of CD1c-PM was morphed with CD1c-MPM-GD3 (the mannosyl headgroup was not shown). PM, spacer lipids, and GD3 are coloured in yellow, lime-green, and pink, respectively. Critical residues involved in DN6 and 22.5 TCR recognitions are shown.