

Publication

Crystallization and preliminary X-ray analysis of an anti-LewisX Fab fragment with and without its LewisX antigen

JournalArticle (Originalarbeit in einer wissenschaftlichen Zeitschrift)**ID** 4531059**Author(s)** van Roon, A. M. M.; Pannu, N. S.; Hokke, C. H.; Deelder, A. M.; Abrahams, J. P.**Author(s) at UniBasel** [Abrahams, Jan Pieter](#) ;**Year** 2003**Title** Crystallization and preliminary X-ray analysis of an anti-LewisX Fab fragment with and without its LewisX antigen**Journal** Acta Crystallographica Section D**Volume** 59**Number** Pt 7**Pages / Article-Number** 1306-9**Mesh terms** Science & TechnologyLife Sciences & BiomedicinePhysical SciencesBiochemical Research MethodsBiochemistry & Molecular BiologyBiophysicsCrystallographyBiochemistry & Molecular Biology-BiophysicsCrystallography

LewisX-containing glycoconjugates are abundantly expressed by schistosomes and are assumed to be of prime importance for the survival of the parasite within the human host. Monoclonal antibody 291-2G3-A, which was generated from mice infected with schistosomes, was found to interact with monomers, dimers and trimers of the LewisX trisaccharide. The Fab fragment of monoclonal antibody 291-2G3-A has been crystallized and soaked with its LewisX antigen. X-ray data sets were recorded for the different Fab crystals with and without LewisX. Crystals grown from 25% polyethylene glycol 3350, 0.17 M ammonium sulfate and 15% glycerol belong to the triclinic space group P1, with unit-cell parameters $a = 67.4$, $b = 71.6$, $c = 104.8$ Angstrom, $\alpha = 86.5$, $\beta = 71.3$, $\gamma = 83.3$ degrees for the native crystals and with slightly different unit-cell parameters $a = 67.3$, $b = 72.4$, $c = 104.8$ Angstrom, $\alpha = 85.8$, $\beta = 71.3$, $\gamma = 83.3$ degrees for the crystals containing bound LewisX. Crystals grown from 14% PEG 3350, 50 mM Tris pH 8 and soaked with LewisX also belong to the triclinic space group P1, but with different unit-cell parameters $a = 45.1$, $b = 60.8$, $c = 91.6$ Angstrom, $\alpha = 96.0$, $\beta = 95.4$, $\gamma = 101.8$ degrees.

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