

Abstract

The protein Nkrp1c is a receptor on the surface of murine natural killer cells belonging to the C-lectin receptor family. These cells create congenital immunity against tumors or pathogens before the formation of antibodies.

Determining the 3D protein structure is often the key to understanding the function of the protein at the molecular level. One way to determine the structure of proteins at the atomic level is nuclear magnetic resonance. The aim of this bachelor thesis was to evaluate several already measured spectra and to assign the resonance frequencies of the peptide backbone atoms needed to obtain data for the secondary structure prediction for Nkrp1c protein, which was prepared by recombinant expression.

The Sparky program was used to evaluate the measured spectra. The prediction of the secondary structure of the Nkrp1c protein itself was performed by programs Talos+ and PSIPRED. The obtained results were compared with the already published homologous model of the Nkrp1c protein receptor.

Keywords: protein NMR, Nkrp1c