Abstract

Natural killer cells (NK cells) are a type of lymphocyte. According to their function they are defined as cytotoxic cells which cause cell death without prior sensitization.

NKR-P1 is one of the families of NK surface receptors. This family belong to C-type lectin like with inhibitory or activatory function. In this work we concern of soluble form of mouse protein Nkr-p1a, that is isoform of activatory receptor Nkr-p1a. This receptor is expected to be intracellular due to lack of major part of its transmembrane domain.

We focus on the optimization of Nkr-p1a production parameters. As production system we used bacterial strain *E. coli* BL21(DE3) Gold, in which the target protein is produced and subsequently isolated in the form of inclusion bodies. Obtained recombinant protein was refolded and purified. As purification step we used high-performance liquid chromatography. We optimized concentration of inductor of expression, production time and temperature. The objective is to set up protocol for preparation of isotopically labeled protein for nuclear magnetic resonance structure characterization.

(in czech)