NK cells are characterized as large granular lymphocytes that play important role in innate immunity. They are called as „first line defense“, because of their capability to kill the target cells very fast, in a few minutes. They recognize the target cells using their surface receptors. This diploma thesis describes the preparation of extracellular domains of the human leukocyte receptor hNKR-P1A and its physiological ligand LLT1. The proteins were produced in *E. coli* as inclusion bodies, refolded *in vitro* by rapid dilution method (hNKR-P1A) and slow dilution method (LLT1). The proteins were purificated by chromatography and characterized by mass spectrometry techniques.