

Resource Summary Report

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Obtaining of NK cell clones using IL-2 and gene-modified K562 cells expressing membrane-bound IL-21

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Protocol Information

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Summary: Here we present the simple and effective method for obtaining clones of NK cells, sorted according to a given set of surface markers. The lifespan of clones grown by this method can reach 14 weeks and cloning efficiency is up to 50%, depending on the original NK cell subset. Obtained clones are functionally active; they are able to lyse target cells and produce IFN γ . The principle of method includes single cell sorting and further clonal expansion in the presence of IL-2 and gene-modified K562 feeder cells. Our method allows to expand the progeny of a single NK cell up to 10-20 $\times$ 10⁶ NK cells suitable to study phenotype, proliferative and functional activity of a certain NK cell clone. The work was supported by Russian Science Foundation, grant #16-15-00309.

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