Cytokine-Transgenic NOG Mice Engrafted with Human Peripheral Blood Cells Support Natural Killer Cell Expansion

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ABSTRACT

Harnessing natural killer (NK) cells and their ability to mediate antibody-dependent cellular cytotoxicity (ADCC) forms the basis for many ongoing immuno-oncology efforts. Currently, most preclinical in vivo studies of ADCC-dependent efficacy rely on syngeneic models, which mandate the generation and use of in situ engineered therapies to overcome differences between mouse and human immune systems. These steps add time and cost, and can be particularly challenging for advanced antibody therapeutics (e.g. bispecific antibodies and antibody-drug conjugates). A need exists for a humanized mouse model that supports human NK cell development and function, as a functional validation platform and potential therapeutic. Given the differences between mouse and human immune systems. These steps add time and cost, and can be particularly challenging for advanced antibody therapeutics (e.g. bispecific antibodies and antibody-drug conjugates). A need exists for a humanized mouse model that supports human NK cell development and function, as a functional validation platform and potential therapeutic.

BACKGROUND

NK cells not supported. Mice succumb to wasting disease within 40 days post engraftment. With the exception of NK cells in hIL-15 NOG mice, engraftment strategies (e.g. using purified human NK cells) are necessary to enable human-NK cell studies in hIL-15 NOG mice.

METHODS

ABSTRACT

One of the emerging NK cell-engraftment strategies (e.g. using purified human NK cells) are necessary to enable human-NK cell studies in hIL-15 NOG mice.

CONCLUSION

SUMMARY

Comparing to conventional NOG mice, survival was severely decreased in hIL-2 NOG mice and slightly increased in hIL-15 NOG mice. hIL-2 NOG mice showed the best engraftment rate for NK cells without any signs of graft vs host disease. Although hIL-2 NOG mice showed the best engraftment rate for NK cells without any signs of graft vs host disease. Although hIL-2 NOG mice showed the best engraftment rate for NK cells without any signs of graft vs host disease. Although hIL-2 NOG mice showed the best engraftment rate for NK cells without any signs of graft vs host disease. Although hIL-2 NOG mice showed the best engraftment rate for NK cells without any signs of graft vs host disease.

REFERENCES