

Low-dose rIL-15 protects from nephrotoxic serum nephritis via CD8⁺ T cells

Agnes A. Mooslechner ¹, Max Schuller ¹, Katharina Artinger ¹, Alexander H. Kirsch ¹, Corinna Schabhüttl ¹, Philipp Eller ², Alexander R. Rosenkranz ¹, Kathrin Eller ^{1,*}

¹ Division of Nephrology, Department of Internal Medicine, Medical University of Graz, 8036 Graz, Austria

² Intensive Care Unit, Department of Internal Medicine, Medical University of Graz, 8036 Graz, Austria

* Correspondence: kathrin.eller@medunigraz.at (KE)

Table of contents

Figure S1. Serum blood urea nitrogen, autologous antibody response, immune cell quantification in the spleen and peripheral blood in mice 7 days after NTS induction treated with low-dose rIL-15 or vehicle.

Figure S2. Quantification of CD8 memory subpopulations in the kidney, purity of transferred CD8 T cells, gene expression of T cell transcription factors in the kidney of mice 7 days after NTS induction treated with low-dose rIL-15 or vehicle. Autologous antibody response and iNKT cell quantification in kidney tissue in *CD8 α ^{-/-}* mice 7 days after NTS induction and treated with or without rIL-15.

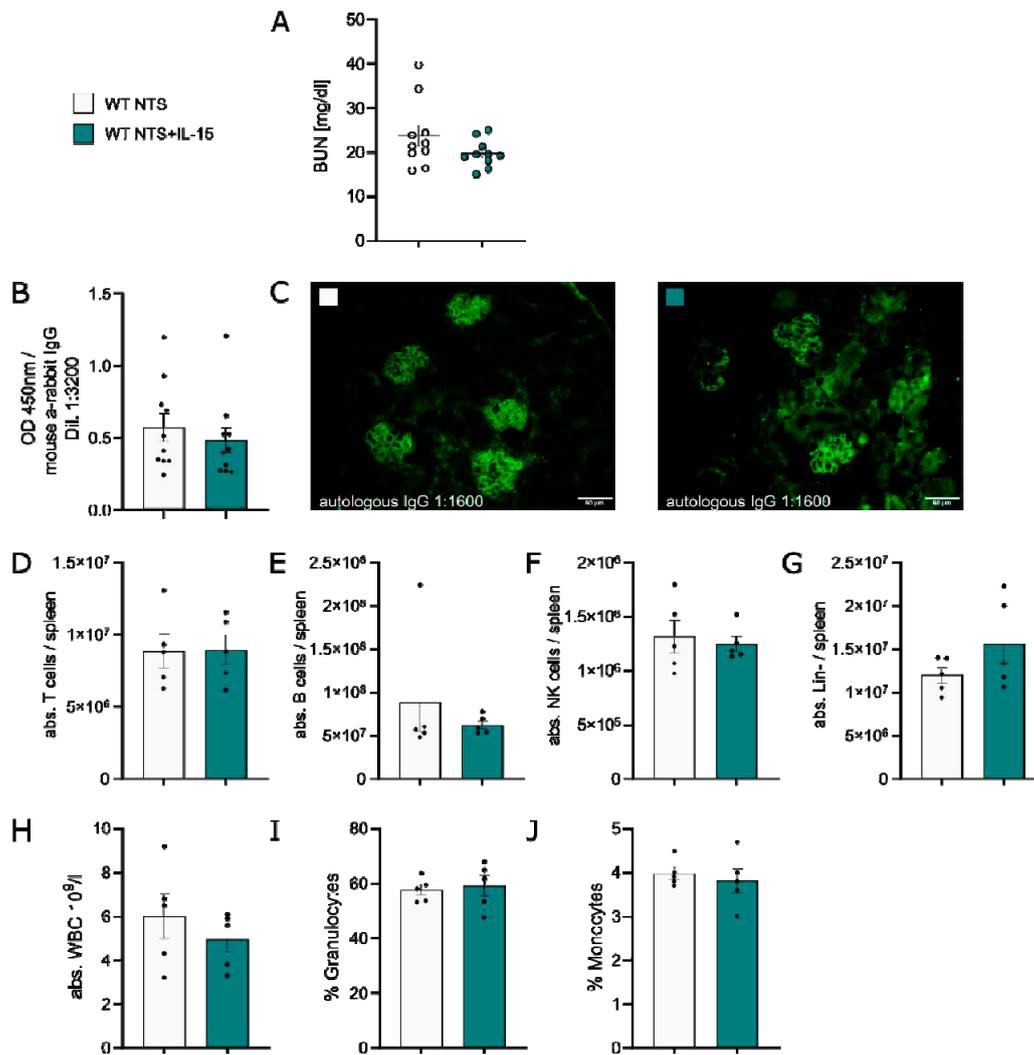


Figure S1. Serum blood urea nitrogen, autologous antibody response, immune cell quantification in the spleen and peripheral blood in mice 7 days after NTS induction treated with low-dose rIL-15 or vehicle. Data represent day 7 of NTS. **(A)** Quantification of blood urea nitrogen in serum. **(B)** Optical density of circulating mouse anti-rabbit IgG in serum and **(C)** representative staining of autologous IgG deposits in kidney tissue. Quantification of **(D)** CD45⁺CD3⁺CD90.2⁺ T cells, **(E)** CD45⁺CD19⁺ B cells, **(F)** CD45⁺NK1.1⁺ NK cells, and **(G)** CD45⁺CD19⁻CD3⁻CD90.2⁻ NK1.1⁻ Lineage negative cells in spleen. **(H)** White blood cell count and analysis of **(I)** granulocyte and **(J)** monocyte frequencies in peripheral blood. Statistical analysis used was Student's t-test or Mann-Whitney test. All data are mean ± SEM.

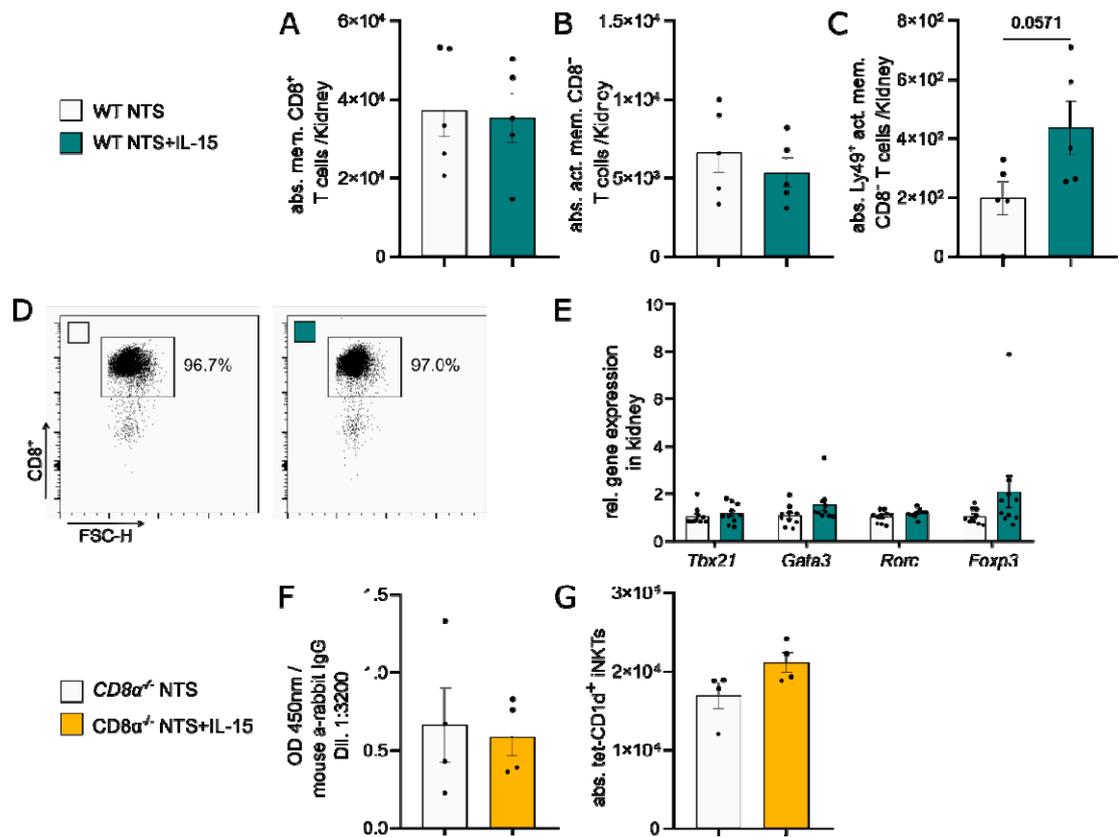


Figure S2. Quantification of CD8 memory subpopulations in the kidney, purity of transferred CD8 T cells, gene expression of T cell transcription factors in the kidney of mice 7 days after NTS induction treated with low-dose rIL-15 or vehicle. Autologous antibody response and iNKT cell quantification in kidney tissue in $CD8\alpha^{-}$ mice 7 days after NTS induction and treated with or without rIL-15. Data represent day 7 of NTS. Quantification of (A) $CD44^+CD8^+$ memory T cells, (B) $CD122^+$ memory $CD8^+$ T cells, and (C) $Ly49^+CD122^+$ memory $CD8^+$ T cells in kidney tissue. (D) Dot plots showing purity of sorted $CD8\alpha^+$ cells from lymph nodes of NTS mice treated with control or IL-15, used for gene expression studies. Plots represent concatenated data of all samples per group. (E) Relative gene expression of *Tbx21*, *Gata3*, *Rorc*, and *Foxp3* in kidney tissue. (F) Optical density of circulating mouse anti-rabbit IgG in serum and quantification of (G) $CD45^+CD19^-CD3^-tet-CD1d^+$ iNKT cells in kidney tissue of $CD8\alpha^{-}$ mice. Statistical analysis used was Student's t-test or Mann-Whitney test. All data are mean \pm SEM.