

SUPPLEMENTARY DATA

Supplementary Table 1. *Percentage of responder or non-responder mice showing 0, 1, 2 or 3 cytokines with an individual value below the average value (among the 3 pro-inflammatory cytokines IFN γ , TNF and IL1 β).*

The average values for each cytokine were calculated with all responder and non-responder mice: IFN γ = 203pg/ml; TNF=137pg/ml; IL1 β =177pg/ml.

78.3% of responder mice show at least 2 or 3 pro-inflammatory cytokines with an individual value below the average value as compared to only 14.3% for non-responder mice.

Number of cytokines with an individual value below the average value among 3 pro-inflammatory cytokines (IFNγ, TNF or IL1β)	Responder mice after combination therapy (protected)	Non-responder mice after combination therapy (sick)
0 among 3	4.3%	57%
1 among 3	17.4%	28.7%
2 among 3	78.3% {	14.3% {
3 among 3		
	47.9%	0%

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Supplementary Figure 1. *Experimental in silico approach and analytes used to identify type 0 and type 2 biomarkers.* Abs, antibodies; Diabet., Diabetogenic; Th, helper T cells; Ins., insulin; Tregs, regulatory T cells; PLN, pancreatic lymph nodes; DCs, Dendritic cells; IL, interleukin; TGF, transforming growth factor; DFA, discriminant function analysis.

1) Conditions employed for in silico experiment:

- Anti-CD3/oral insulin combination therapy
 - 10 μ g anti-CD3 intravenous every day for 3 days
 - 1mg oral insulin twice a week for 5 consecutive weeks
 - administered when the blood glucose value reaches 250mg/dl

2) Measurements were taken of the following analytes at various time points:

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| 1. Blood glucose | 13. Ratio of diabet. Th T cells : T regs |
| 2. Blood insulin | 14. Percentage change in lymphocyte numbers |
| 3. Blood auto-Abs. | 15. TNF α (islet and PLN) |
| 4. Diabet.Th T cells | 16. IFN γ (islet and PLN) |
| 5. Diabet.Th T cells | 17. IL-1 (islet and PLN) |
| 6. Naïve Ins. specific CD4 ⁺ T cells | 18. IL-12 (islet and PLN) |
| 7. Diabet. CD8 ⁺ T cells | 19. IL-10 (islet and PLN) |
| 8. Naïve Ins. specific CD8 ⁺ T cells | 20. TGF β (islet and PLN) |
| 9. Diabet. regulatory T cells | 21. Inflammatory DCs |
| 10. Resting Ins. specific regulatory T cells | 22. Suppressor DCs |
| 11. Active diabet. B cells | 23. Ratio of proinflammatory:regulatory cytokines |
| 12. Ratio of diabet. CD8 ⁺ T cells : T regs | |

3) DFA was used to analyze the data to identify type 0 and type 2 biomarkers at:

- 9, 10 and 11 weeks of age for type 0 biomarkers
- 0 and 3 days, and 1, 2, 4 and 6 weeks after therapy for type 2 biomarkers