

SUPPLEMENTARY DATA

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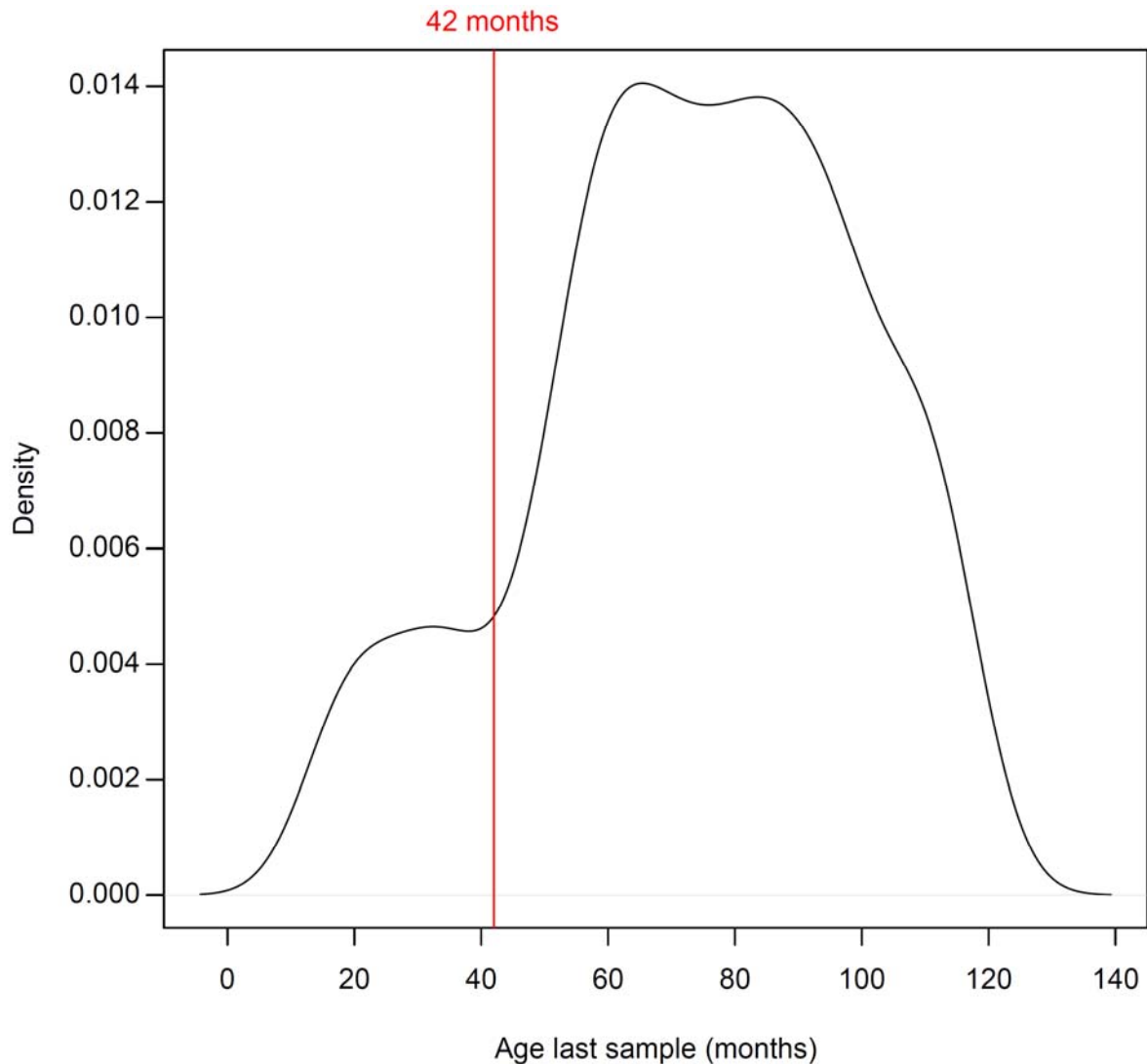
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Supplementary Table 1. Distribution of features among the single autoantibody clusters (sC1-sC9). T1D, type 1 diabetes; C-Section, Caesarean section; IQR, interquartile range.

Autoantibody Cluster	all	sC1	sC2	sC3	sC4	sC5	sC6	sC7	sC8	sC9
N	230	41	33	9	5	21	50	26	27	18
Age (years) of seroconversion median (IQR)	3.5 (1.8-5.1)	3.1 (2.3-3.7)	5.2 (5.0-6.0)	3.5 (3.3-3.8)	4.4 (3.3-4.8)	2.1 (1.3-3.3)	5.9 (2.0-7.7)	1.8 (1.0-4.6)	4.5 (1.9-5.7)	3.1 (2.5-4.0)
T1D prevalence (%)	7	12	3	0	40	33	0	0	0	0
5-year T1D risk % (95% CI)	10 (4-15)	12 (0-24)	3 (0-90)	- -	- -	46 (10-68)	0 (0-0)	0 (0-0)	0 (0-0)	0 (0-0)
Maternal T1D (%)	4	5	3	0	20	5	4	4	0	6
HLA DR3/DR3 (%)	21	38	24	44	0	0	24	12	7	18
HLA DR4/DR3 (%)	42	43	45	33	40	52	34	54	44	29
HLA DR4/DR4 (%)	18	13	15	11	40	19	26	12	26	0
HLA DR4/DRx	20	8	15	11	20	29	16	23	22	53
ZnT8A (%)	14	37	12	0	80	10	6	15	0	6
C-Section (%)	26	27	30	44	40	24	26	15	22	22
Male (%)	57	49	70	44	100	62	62	65	52	22

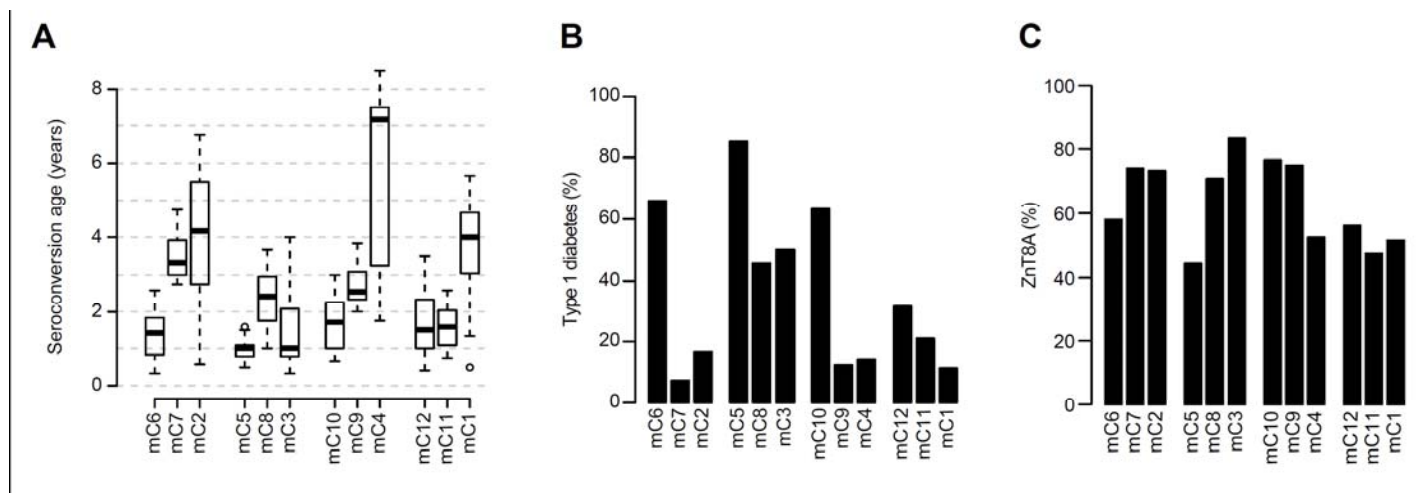
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Supplementary Figure 1. Distribution of follow-up time of 600 children who developed persistent beta cell autoimmunity. Density is plotted for age of last available follow-up serum sample among all follow-up samples of all children. A vertical red line is drawn at age 42 months, separating two groups of children with short and long follow-up time, respectively.



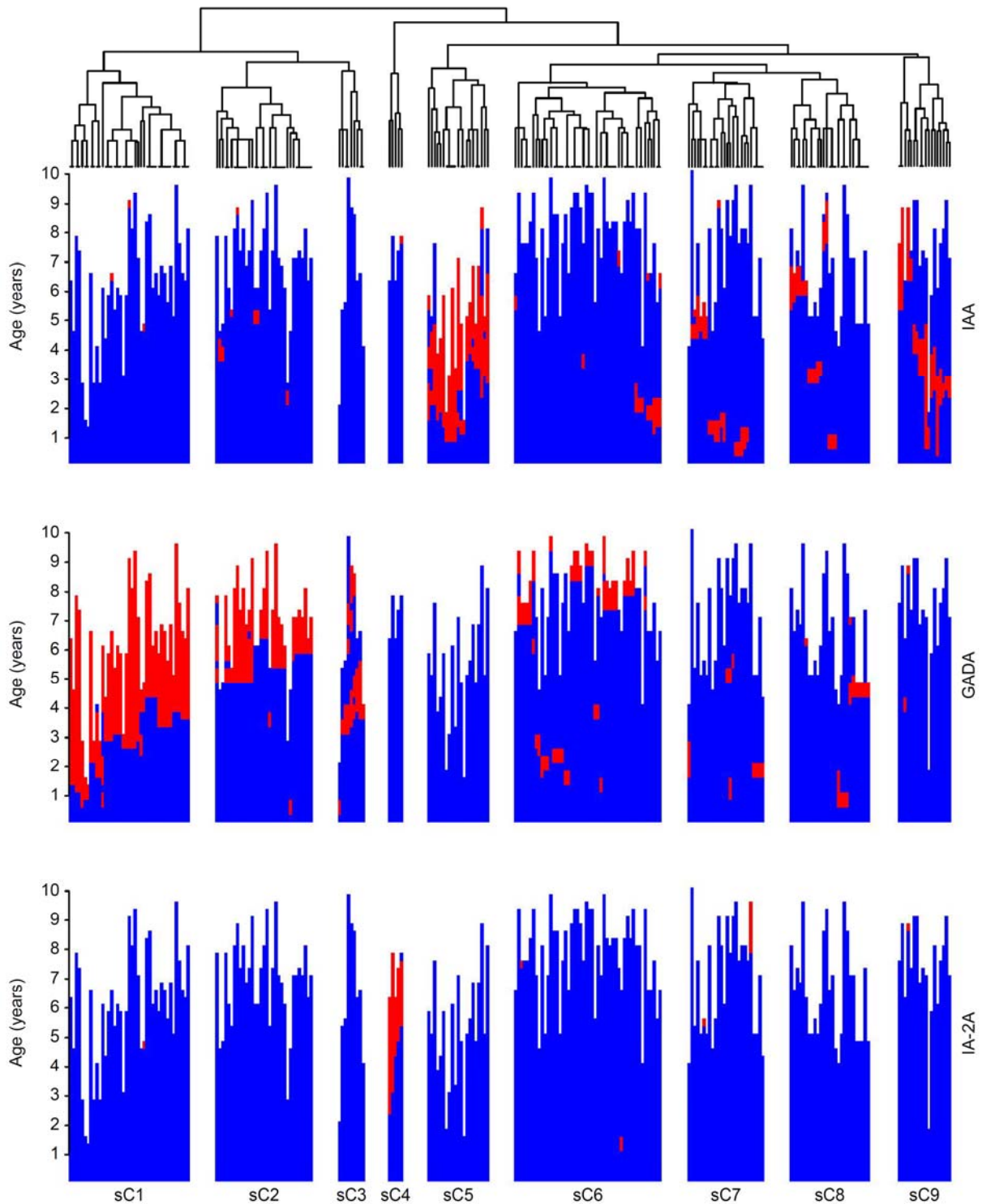
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Supplementary Figure 2. Multiple autoantibody clusters (mC1-mC12) are grouped into four groups of three clusters each, based on similarity of autoantibody patterns over time. For clusters of each group is shown: **(A)** the age of seroconversion (median [quartiles]); **(B)** the overall frequency of diabetes throughout follow-up; **(C)** the percentage of children who were ZnT8A-positive on follow-up.



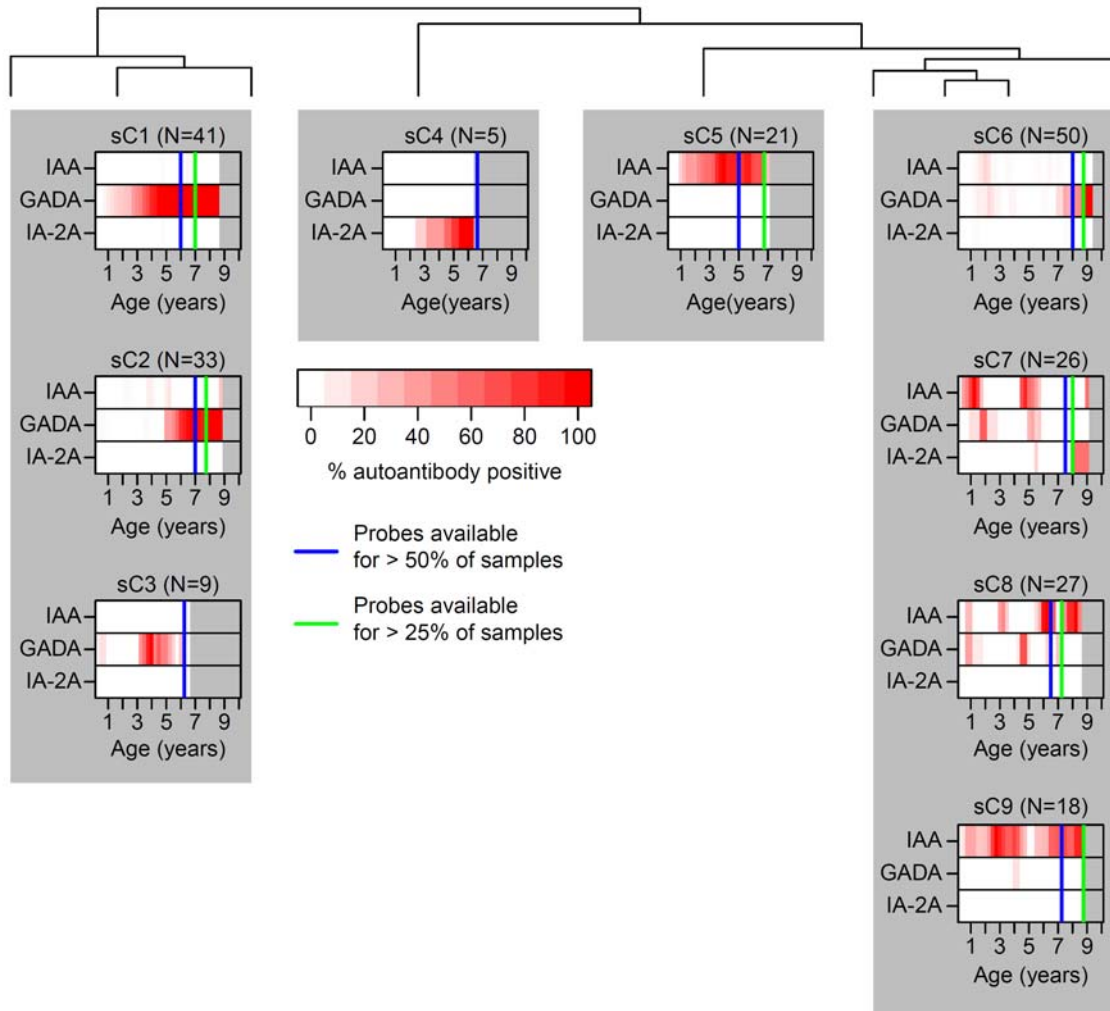
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Supplementary Figure 3. Hierarchical clustering results for longitudinal autoantibody profiles of 230 children who developed single beta cell autoantibodies. The dendrogram is divided into 9 single autoantibody clusters (sC1-sC9). Each column represents the follow-up time from birth for one child. The qualitative status of IAA, GADA and IA-2A, respectively, is indicated by color (red = antibody-positive; blue = antibody-negative) with respect to the age at antibody measurement.



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Supplementary Figure 4. Aggregated longitudinal profiles of IAA, GADA, and IA-2A are shown for children of single autoantibody clusters (sC1-sC9). For each cluster, the percentage of children positive for the respective autoantibody is indicated by color (white: 0% positive; red: 100% positive) with respect to age. The blue and green lines indicate the age until which >50% and >25% of children in the cluster were followed, respectively. Autoantibody profiles are plotted until only 2 children in the cluster remained in follow-up.



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Supplementary Figure 5. Single autoantibody clusters (sC1-sC9). For each cluster is shown: For each cluster is shown: (A) the percentage of children who were stable positive, transiently positive, or negative on follow-up IAA, GADA and IA-2A, respectively; (B) the cumulative diabetes-free survival from autoantibody seroconversion (not shown for sC3 and sC4; each n<10); (C) the percentage of children who were ZnT8A-possirvie on follow-up; (D)the proportions of HLA-DR genotypes.

