



Pharmacokinetics,
Immunogenicity, and
Pharmacodynamics Following
Repeat Dosing of SAB-142, a
Fully Human Multi-Specific
Anti-Thymocyte Globulin for
New Onset T1D

June 5th, 2026



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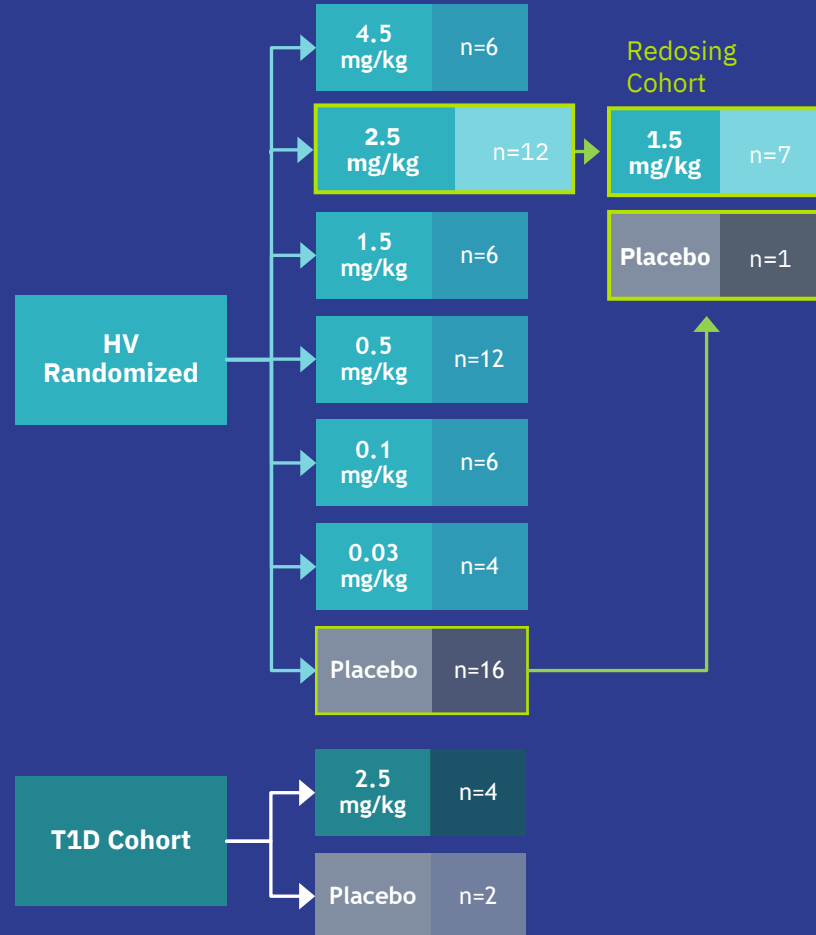
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SAB-142-101: Phase 1: HUMAN* Trial Study Design

Randomized, double-blind, placebo-controlled, single- and multiple- ascending dose, adaptive design clinical study



SAB-142 Phase 1 Data: Encouraging Efficacy Signals and Predictable, Safe Redosing



Efficacy

Encouraging early signals of C-peptide preservation in T1D patients >2 yrs from diagnosis



Early C-peptide signal consistent with beta cell preservation



Immunogenicity

Confirmed: SAB-142 has low immunogenicity



Low immunogenicity



Enables safe and reliable redosing



PK/PD

T cell preservation with enhanced “exhaustion” signature



Predictable PK upon redosing



Tregs preserved, increased T cell “exhaustion” signature



Safety and Tolerability

Positions SAB-142 for a convenient, potentially twice a year dosing regimen



No lymphodepletion; no neutropenia



No serum sickness; Grade 1/mild CRS only

SAB-142-101:

T1D Cohort at 2.5mg/kg

✓ SAB-142 has promising efficacy in an exploratory T1D cohort >2 years from diagnosis

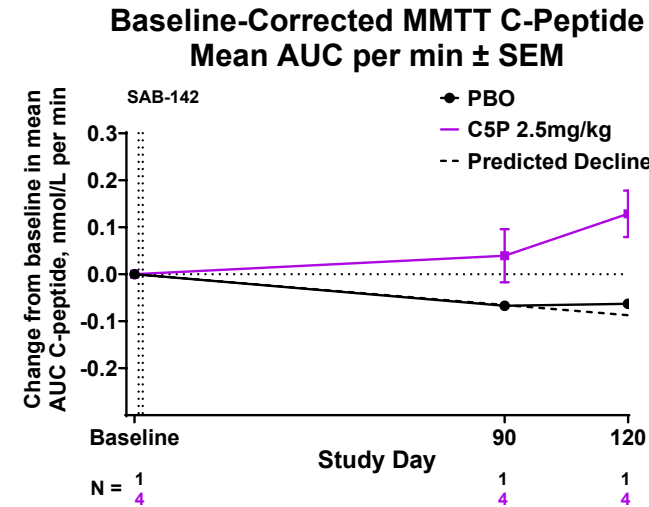
✓ 4 of 4 patients showed C-peptide preservation through 120 Days; 3 of 4 had enhanced C-peptide

✓ TIR improved from 73% at baseline to 85% by End of Study

✓ Insulin doses decreased over time in the SAB-142 group

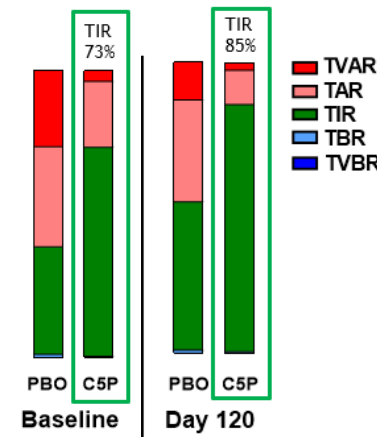
SAB-142 Improved C-Peptide and Glycemic Control

C-Peptide Preservation

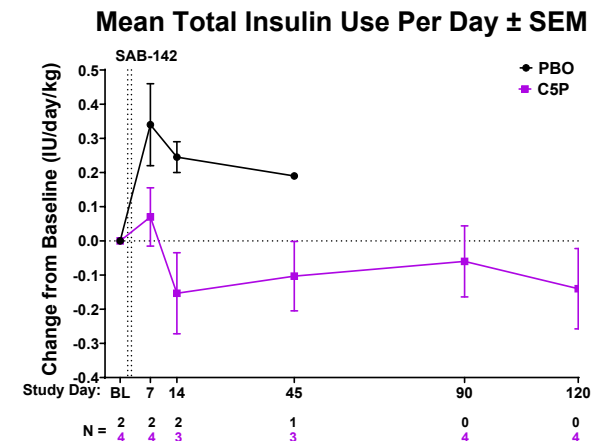


¹ Predicted decline was estimated by first calculating the incremental AUC of TN19 placebo subject C-peptide MMTT data (n=26) for Weeks 48-96 with post-2hr values masked. The linear slope was used to calculate the predicted rate of decline in days: $AUCBL - (-0.6108 * (\text{Study Day}/7))$. Source: Haller et al. Diabetes. 2019 Jun;68(6):1267-1276. MMTT = Mixed Meal Tolerance Test; AUC = Area Under the Curve; SEM = Standard Error the Mean.

Improved Glycemic Control



Reduced Exogenous Insulin Use



SAB-142 Safety Profile Enables Induction Dose and Redose (Maintenance dosing) in an Ambulatory Setting

Majority of adverse events (AEs) are mild, associated with Day 1-2 infusions, and resolved by the end of the first week

Safety profile enables ambulatory dosing

Most Frequent TEAEs:

- Headaches: typical for all T-cell-engaging therapies
- Transient lymphopenia (margination):
 - Anticipated PD effect; **self-resolves within 1-3 days**
 - **Accounts for 100% of Grade 3 & 4 drug related TEAEs** and not associated with clinical symptoms
- Infusion-related reactions (IRRs):
 - CRS: flu-like symptoms, Grade 1 (mild) only, temporarily associated with SAB-142 infusions with onset up to 24 hours
 - **1.5 mg/kg induction and maintenance dose had no CRS**
 - Infusion-site reactions (ISR): erythema, tenderness, phlebitis
- No serum sickness, no AEs associated with ADAs
- No decrease in RBCs, no neutropenia, no lymphopenia, or thrombocytopenia from Day 7 on
- No drug related SAEs

Overall summary of treatment emergent adverse events (safety analysis set)

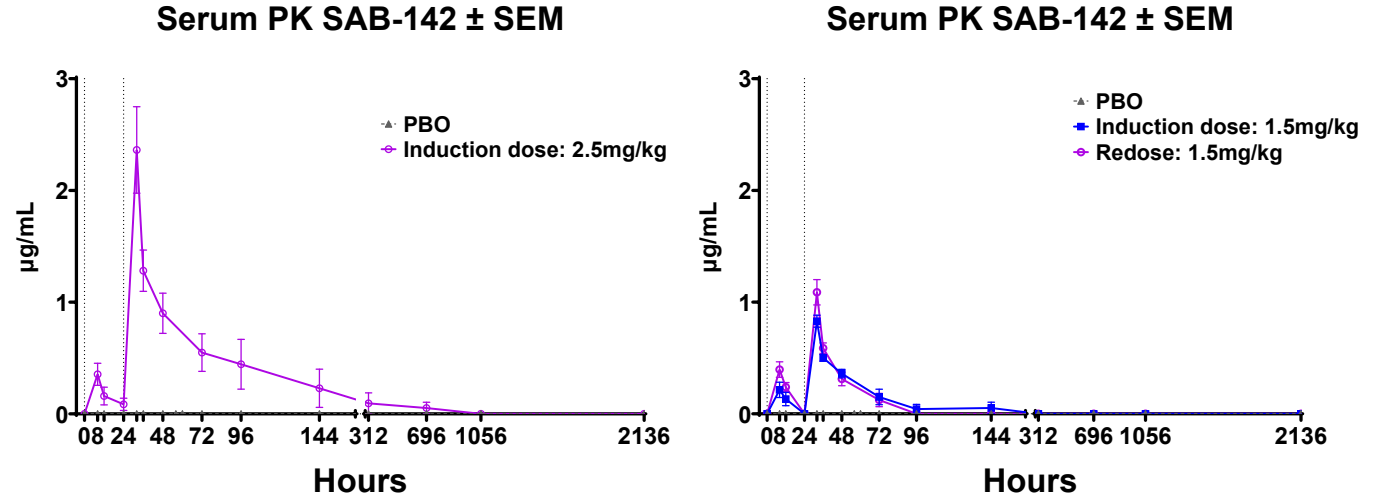
Category	Part A: Induction Dose				Part B: Maintenance Dose			
	Day 1 to 7		Day 8 to 180		Day 1 to 7		Day 8 to 180	
	Pooled Placebo HV+T1D (N=18) n (%)	Pooled SAB-142 HV+T1D (N=50) n (%)	Pooled Placebo HV (N=18) n (%)	Pooled SAB-142 HV (N=50) n (%)	Pooled Placebo HV (N=1) n (%)	Pooled SAB-142 HV (N=7) n (%)	Pooled Placebo HV (N=1) n (%)	Pooled SAB-142 HV (N=7) n (%)
Number of participants with any:								
TEAEs	12 (66.7%)	46 (92.0%)	11 (61.1%)	27 (54.0%)	1 (100.0%)	7 (100.0%)	0	4 (57.1%)
TEAEs by Severity:								
Grade 1	8 (44.4%)	2 (4.0%)	5 (27.8%)	17 (34.0%)	1 (100.0%)	0	0	2 (28.6%)
Grade 2	4 (22.2%)	3 (6.0%)	5 (27.8%)	9 (18.0%)	0	0	0	1 (14.3%)
Grade 3	0	16 (32.0%)	1 (5.6%)	1 (2.0%)	0	5 (71.4%)	0	1 (14.3%)
Grade 4	0	25 (50.0%)	0	0	0	2 (28.6%)	0	0
Grade 5	0	0	0	0	0	0	0	0
Treatment-related TEAEs by Severity:								
Grade 1	4 (22.2%)	1 (2.0%)	0	6 (12.0%)	0	0	0	2 (28.6%)
Grade 2	2 (11.1%)	3 (6.0%)	1 (5.6%)	2 (4.0%)	0	0	0	0
Grade 3	0	16 (32.0%)	0	0	0	5 (71.4%)	0	0
Grade 4	0	25 (50.0%)	0	0	0	2 (28.6%)	0	0
Grade 5	0	0	0	0	0	0	0	0

SAB-142 is a Fully Human Biologic: Low Immunogenicity and Comparable Redosing PK Profile

SAB-142: Low immunogenicity

- There was no ADA positivity following the redose administration of SAB-142 through Day 360 (including initial administration)
- No Serum Sickness
- This demonstrates that SAB-142 is substantially less immunogenic than rATG or teplizumab

SAB-142: Predictable PK



- SAB-142 PK profile is dose dependent
- As anticipated, due to low immunogenicity, the induction and redose (maintenance dose) serum PK profiles were indistinguishable

★ *No lymphodepletion after induction and maintenance (redose)*



SAB-142: Transient lymphopenia due to lymphocyte margination



Lymphocytes recover back to baseline by Day 4-5 after induction and maintenance doses of SAB-142

Rabbit ATG causes sustained lymphodepletion up to 2 years

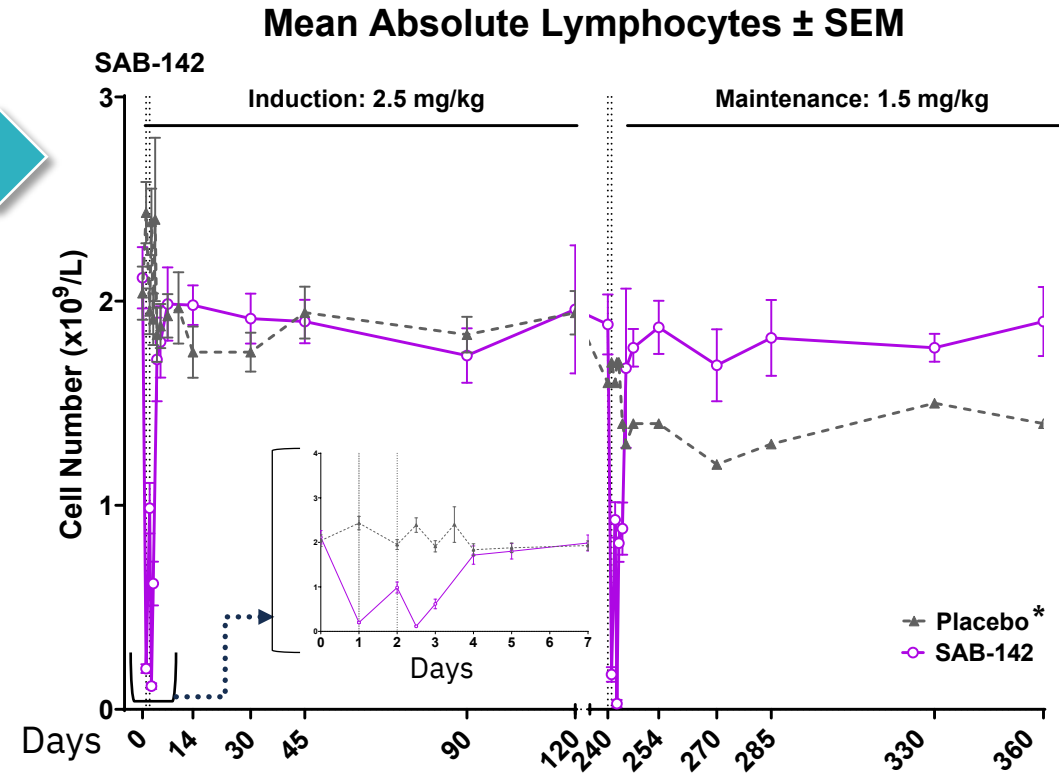
JCI insight

CLINICAL MEDICINE

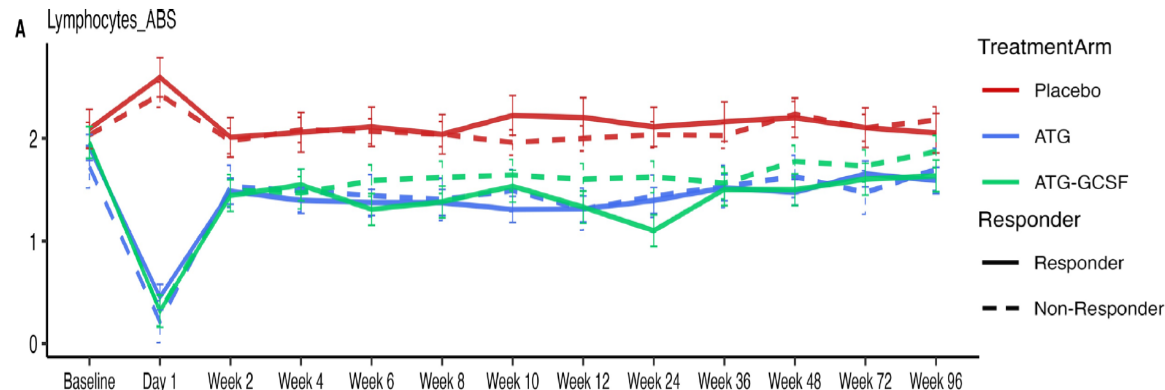
Responders to low-dose ATG induce CD4⁺ T cell exhaustion in type 1 diabetes

Laura M. Jacobsen,^{1,2} Kirsten Diggins,¹ Lori Blanchfield,¹ James McNichols,² Daniel J. Perry,² Jason Brant,² Xiaoru Dong,^{2,4} Rhonda Bacher,⁴ Vivian H. Gersuk,¹ Desmond A. Schatz,¹ Mark A. Atkinson,^{1,2} Clayton E. Mathews,^{1,2} Michael J. Haller,¹ S. Alice Long,¹ Peter S. Linsley,¹ and Todd M. Brusko^{1,2}

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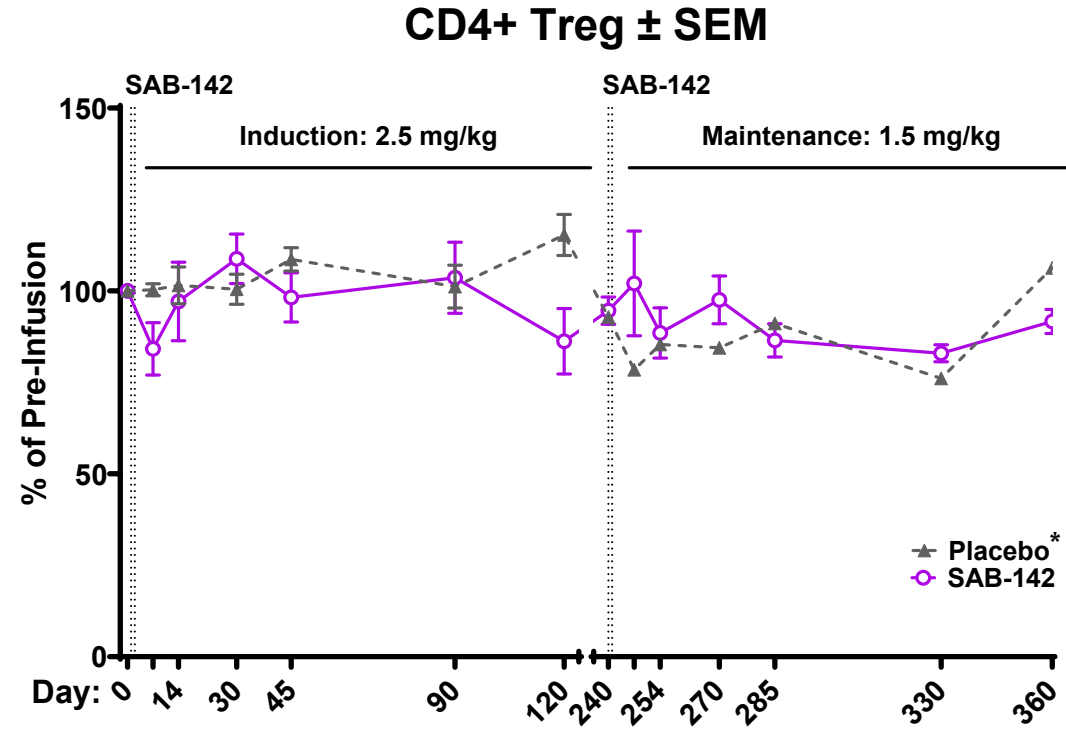


* Single placebo in redosing Cohort



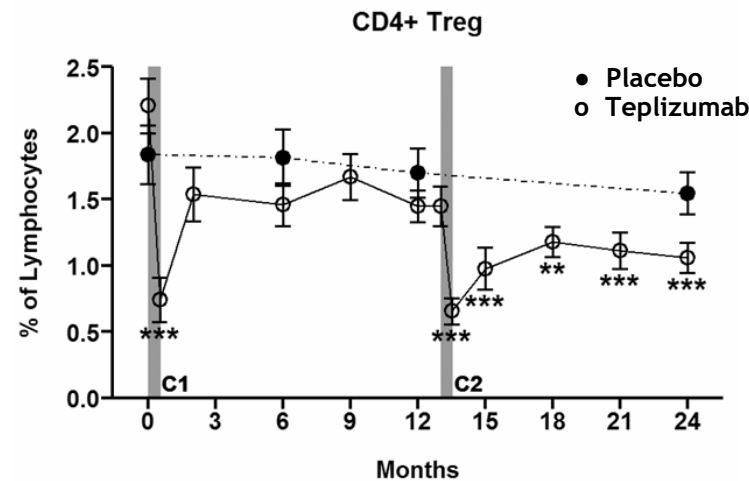
★ No Treg depletion

✓ SAB-142: Tregs are preserved post induction dose (2.5 mg/kg) and maintenance dose (1.5 mg/kg)



* Single placebo in redosing Cohort

Teplizumab depletes CD4+ Tregs upon redosing



Research paper

Remodeling T cell compartments during anti-CD3 immunotherapy of type 1 diabetes

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SAB-142-101

Phase 1 Top Line

SAB-142 upregulates CD4⁺ Tconv Cell exhaustion markers

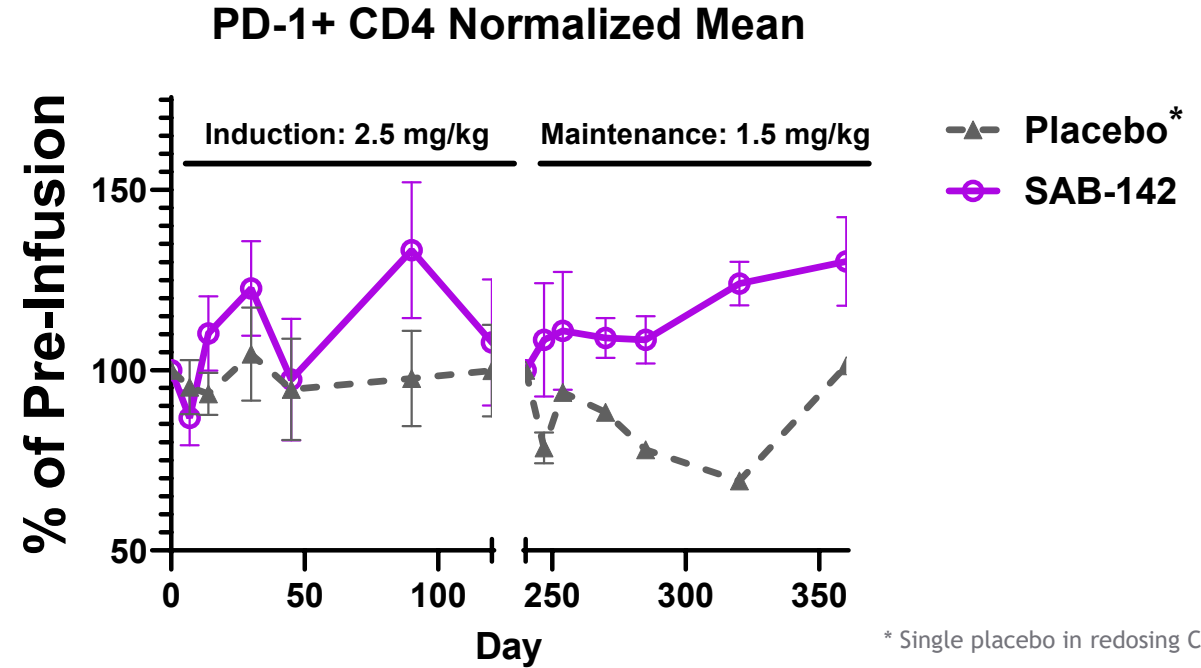


SAB-142 induced sustained expression of inhibitory receptor PD-1 on CD4⁺ T conventional cells; indicative of an exhausted phenotype.

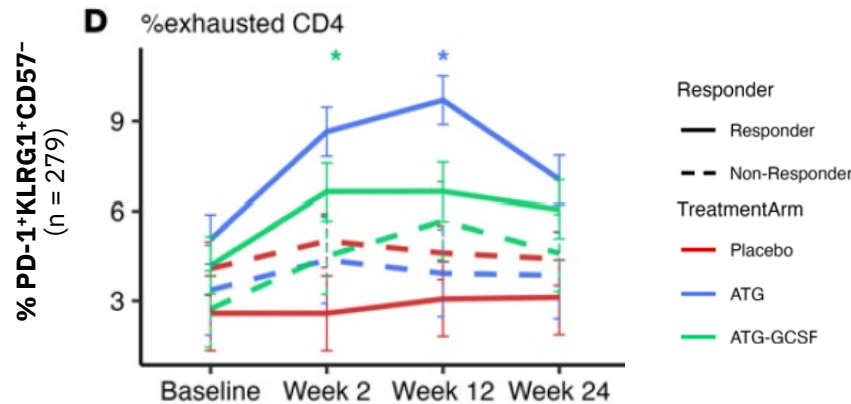
Rabbit ATG CD4⁺ T Cell Dual Exhaustion Markers

Low-dose ATG induced sustained expression of co-inhibitory receptors (PD-1, KLRG1) on CD4⁺ cells indicating exhaustion-like phenotype which correlates with C-Peptide preservation.

SAB-142 Demonstrates Sustained CD4⁺ T Conventional Cell Exhaustion Similar to rATG



* Single placebo in redosing Cohort



JCI INSIGHT CLINICAL MEDICINE
Responders to low-dose ATG induce CD4⁺ T cell exhaustion in type 1 diabetes

SAFEGUARD: Multicenter, Global Phase 2b Safety and Efficacy Trial of SAB-142 in Stage 3 Type 1 Diabetes Patients



SAFety and Efficacy of human anti-thymocyte immunoGlobUlin SAB-142 ARresting progression of Type 1 Diabetes

Trial design:

- › 159 pediatric, adolescent, and adult patients (5-40 years)
 - **Part A:** 12 patients – dose-ranging study for 12 months
 - **Part B:** 147 patients – randomized, double-blind, placebo-controlled, dose-ranging study for 12 months
 - **Part C:** All patients including placebo with preserved beta cells eligible for 12-month long-term extension study upon completion

Inclusion criteria:

- › New onset Stage 3 T1D: within 100 days of diagnosis
- › Baseline C-peptide ≥ 200 pmol/L

Dosing regimen:

- › Intravenous (IV)
- › 0.5 mg/kg on Day 1 and remainder of dose Day 2
- › Induction dose levels: 1.5 and 2.5 mg/kg
- › **Maintenance dose: 1.5 mg/kg every 6 months**

Global study initiated; first patient dosed in **December 2025** with **Topline results expected 2H 2027**



United States
(FDA) NCT07187531



Europe
(EMA)



United Kingdom
(MHRA)

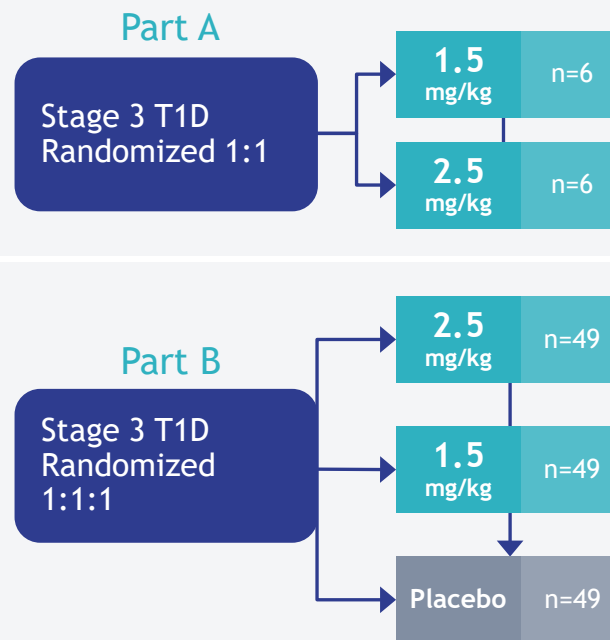


Australia
(TGA)



New Zealand
(MEDSAFE)

Phase 2b Study Design



Primary Endpoint:



Stimulated C-peptide

following 2-hr MMTT at 12 months
(detect at least 40% difference with 80% power)

Secondary Endpoint:



**Leading Clinical Endpoint:
HbA1C**

Other secondary Endpoints:

- › Time in Tight Range, Time in Range, Time Above and Below Range
- › Hypoglycemic episodes
- › Safety