

# Checklist for Reporting Human Islet Preparations Used in Research

Adapted from Hart NJ, Powers AC (2018) Progress, challenges, and suggestions for using human islets to understand islet biology and human diabetes. *Diabetes* 67:1000-1010.

Selected Islet Preparations for Alvin C. Powers

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Labels in blue text are additional fields or clarification provided by IIDP

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**Title** Mitochondrial efflux of citrate and isocitrate is fully dispensable for glucose-stimulated insulin secretion and pancreatic islet function  
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Islet Preparation	1	2	3	
<b>MANDATORY INFORMATION</b>				
Unique identifier	SAMN10372788	SAMN11155033	SAMN12123358	
Donor Age (years)		50	51	66
Donor Sex (M/F)	F	M	F	
Donor BMI (kg/m <sup>2</sup> )	35.4	24.0	29.1	
Donor HbA1c	9.9	4.7	7.2	
Origin/source of islets	IIDP	IIDP	IIDP	
Islet isolation center <sup>a</sup>	Southern California Islet Cell Resource	Southern California Islet Cell Resource	The Scharp-Lacy Research Institute	
Donor history of diabetes? Yes/No	T2D	No	T2D	
<b>If Yes, complete the next two lines if this information is available</b>				
Diabetes duration (years)	>10 years	Not Applicable	6-10 years	
Glucose-lowering therapy at time of culture	Oral Medicine	Not Applicable	Oral Medicine: Metformin	
<b>RECOMMENDED INFORMATION</b>				
Cause of death	Cerebrovascular/stroke	Head trauma	Cerebrovascular/stroke	
Warm ischemia time (h)	Not Reported	Not Reported	Not Reported	
Cold ischemia time (h)	8.6	8.8	7.9	
Estimated purity (%)				
By islet isolation center at time of shipment with Dithizone (DTZ) staining per IIDP SOP	80	80	85	
Estimated viability (%)				
By islet isolation center at time of broadcast with Fluorescence Diacetate/Propidium Iodide (FDA/PI) staining per IIDP SOP	96	95	95	
Total culture time(h) <sup>c</sup>				
Calculate[start date/time of experiment]-[date/ time islet culture began (below)]	To be completed by investigator	To be completed by investigator	To be completed by investigator	
Date/Time Islet Culture Began at islet isolation center (Pacific Standard Time, 24-hour format)	2018-11-03 16:20	2019-03-15 13:40	2019-06-20 17:00	
Glucose-stimulated insulin secretion or other functional measurement <sup>d</sup>				
Stimulation Index (SI) by static incubation at islet isolation center pre-shipment per IIDP SOP	SI (G2.8mM-G28mM)= 1.1	SI (G2.8mM-G28mM)= 1.0	SI (G2.8mM-G28mM)= 1.8	
Glucose-stimulated insulin secretion or other functional measurement Area Under the Curve (AUC) by perfusion at HIPP post shipment sample per HIPP SOP	AUC (G5.6mM-G16.7mM)= 9.7 (ng/100 IEQs)	AUC (G5.6mM-G16.7mM)= 21.5 (ng/100 IEQs)	AUC (G5.6mM-G16.7mM)= 21.5 (ng/100 IEQs)	
Handpicked to purity? Yes/No	To be completed by investigator	To be completed by investigator	To be completed by investigator	
Additional notes	To be completed by investigator	To be completed by investigator	To be completed by investigator	

\*Shipments of more than one batch type were received from this islet isolation

<sup>a</sup>For example, IIDP, ECIT, Alberta IsletCore

<sup>b</sup>Please specify the therapy/therapies

<sup>c</sup>Time of islet culture at the isolation centre, during shipment and at the receiving laboratory

<sup>d</sup>Please specify the test and the results

pancreatic islet  $\beta$ -cell function

4	5	6	7	
SAMN12129273	SAMN12597653	SAMN12634037	SAMN15894111	
	30	42	63	58
F	F	M	F	
35.7	40.3	31.7	26.8	
4.5	9.5	5.9		
IIDP	IIDP	IIDP	IIDP	
Southern California Islet Cell Resource	Southern California Islet Cell Resource	Southern California Islet Cell Resource	Southern California Islet Cell Resource	
No	T2D	T2D	No	
Not Applicable	>10 years	6-10 years	Not Applicable	
Not Applicable	Oral Medicine	Oral Medicine	Not Applicable	
Anoxia	Cerebrovascular/stroke	Cerebrovascular/stroke	Cerebrovascular/stroke	
0.2	0.3	No	No	
10.6	11.2	10.9	9.2	
90	80	85	90	
96	96	95	95	
To be completed by investigator	To be completed by investigator	To be completed by investigator	To be completed by investigator	
2019-06-24 08:00	2019-08-16 07:25	Not Reported	Not Reported	
SI (G2.8mM-G28mM)= 1.8	SI (G2.8mM-G28mM)= 0.4	SI (G2.8mM-G28mM)= 5.0	SI (G2.8mM-G28mM)= 5.9	
AUC (G5.6mM-G16.7mM)= 15.5 (ng/	AUC (G5.6mM-G16.7mM)= 20.9 (ng/	AUC (G5.6mM-G16.7mM)= Not Avail	AUC (G5.6mM-G16.7mM)= Not Avail	
To be completed by investigator	To be completed by investigator	To be completed by investigator	To be completed by investigator	
To be completed by investigator	To be completed by investigator	To be completed by investigator	To be completed by investigator	



8	9	10	11	
SAMN15944113	SAMN16365027	SAMN16452455	SAMN17831932	
	42	62	39	60
F	F	M	M	
23.5	28.5	31.1	41.3	
	7.6	5.6	7.5	
	IIDP	IIDP	IIDP	
Southern California Islet Cell Resource	Southern California Islet Cell Resource	University of Pennsylvania	Southern California Islet Cell Resource	
No	T2D	No	T2D	
Not Applicable	0-5 years	Not Applicable	Unknown	
Not Applicable	Oral Medicine	Not Applicable	Oral Medicine	
Cerebrovascular/stroke	Cerebrovascular/stroke	Anoxia	Cerebrovascular/stroke	
No	0.1	Not Reported	0.3	
11.3	7.0	7.9	7.2	
95	90	85	80	
95	96	92	96	
To be completed by investigator	To be completed by investigator	To be completed by investigator	To be completed by investigator	
Not Reported	2020-10-04 05:00	2020-10-15 15:00	2021-02-06 05:30	
SI (G2.8mM-G28mM)= 4.3	SI (G2.8mM-G28mM)= 6.6	SI (G2.8mM-G28mM)= 3.0	SI (G2.8mM-G28mM)= 1.3	
AUC (G5.6mM-G16.7mM)= Not Avail	AUC (G5.6mM-G16.7mM)= 0.0 (ng/1	AUC (G5.6mM-G16.7mM)= Not Avail	AUC (G5.6mM-G16.7mM)= 0.0 (ng/1	
To be completed by investigator	To be completed by investigator	To be completed by investigator	To be completed by investigator	
To be completed by investigator	To be completed by investigator	To be completed by investigator	To be completed by investigator	



12	13	14	
SAMN18200483	R276	SAMN18207297	
	48	54	47
F	F	M	
47.6	24.4	40.3	
5.4	7.2	5.5	
IIDP	Alberta Diabetes Institute	Alberta Diabetes Institute	
Southern California Islet Cell Resource	Islet Core	Islet Core	
No	T2D	No	
Not Applicable	10 yr	Not Applicable	
Not Applicable	Insulin	Not Applicable	
Cerebrovascular/stroke	Not Reported	Not Reported	
Not Reported	Not Reported	Not Reported	
6.6	21	6	
90	75	90	
96	Not Reported	Not Reported	
To be completed by investigator	To be completed by investigator	To be completed by investigator	
2021-03-06 22:25	Not Reported	Not Reported	
SI (G2.8mM-G28mM)= 2.0	Not Reported	Not Reported	
AUC (G5.6mM-G16.7mM)= 0.0 (ng/1	Not Reported	Not Reported	
To be completed by investigator	To be completed by investigator	To be completed by investigator	
To be completed by investigator	To be completed by investigator	To be completed by investigator	