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Supporting Information

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Optimizing Multiplexed Detections of Diabetes Antibodies via Quantitative Microfluidic Droplet Array

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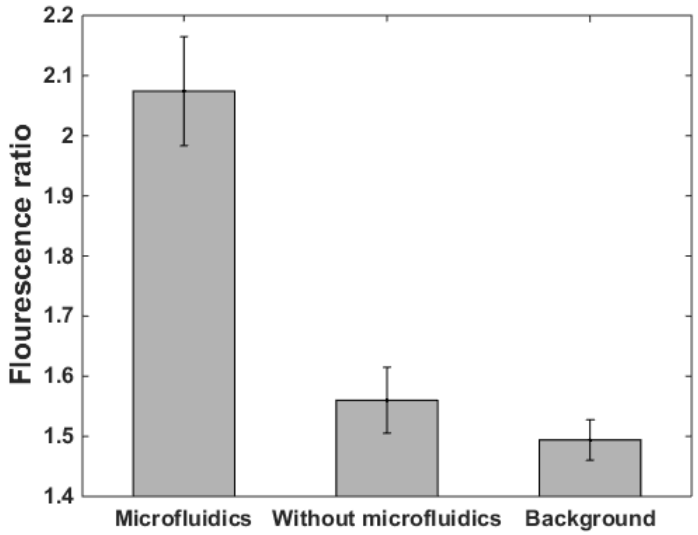

Figure S1. Detection of IA-2 antibodies with and without microfluidic perfusion. Without microfluidic perfusion, IA-2 antibody fluorescence signal will be significantly lower after the 2-hour assay protocol. This shows that fluid shielding at the surface of the microgels prevents reagent turn over.

Table S1. Group comparison for singleplex and duplex detections versus background

Ab's tested	Capture Antigens		
	insulin	**GAD**	**IA-2**
Insulin	<0.0001	0.2746	0.1283
GAD	0.3887	<0.0001	0.9443
IA-2	0.112	0.301	<0.0001
Ins+GAD	<0.0001	<0.0001	0.7061
Ins+IA-2	<0.0001	0.2928	<0.0001
GAD+IA-2	0.9067	<0.0001	<0.0001

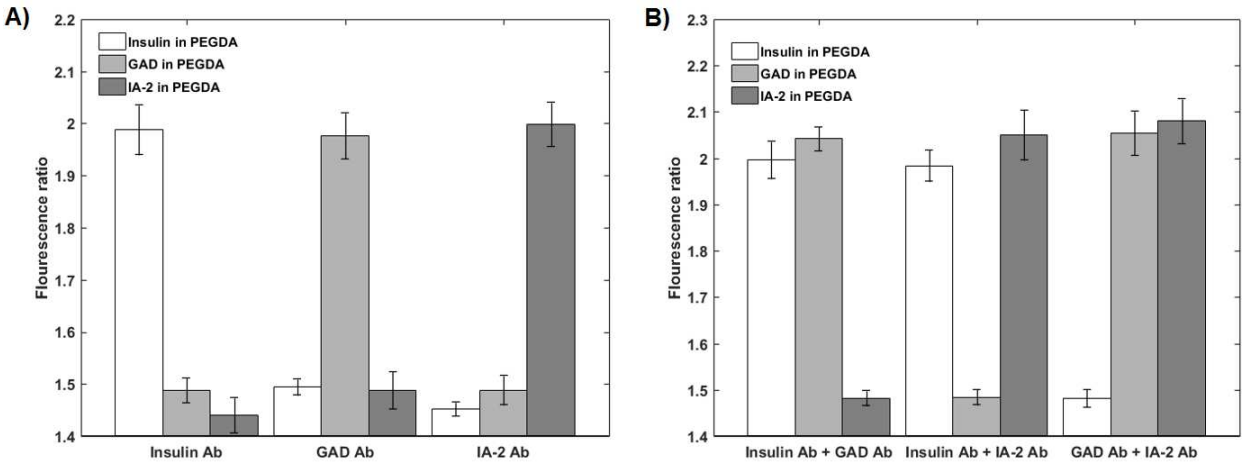

Figure S2. Cross-reactivity of the assay. A) Singleplex cross-reactivity with error bars denoting standard deviations. B) Duplex cross-reactivity with error bars denoting standard deviations. The 2D plots, together with **Table S1**, further clarify the statistics behind the multiplexing cross-reactivity tests.