

Electronic Supplementary Information for

Cell mimic polymersomes-shielded islets for long-term immune protection of neonatal porcine islet-like cell clusters

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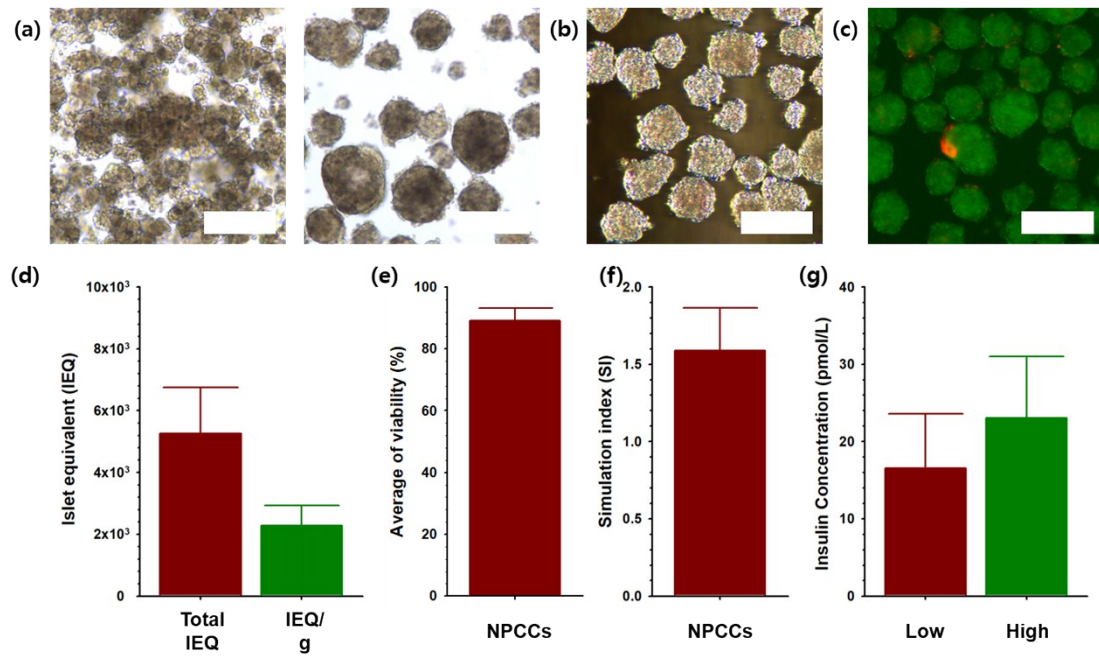


Fig S1. Characterization and yield of NPCCs. (a) Light microscopic images of NPCCs after isolation at days 0 and 5. (b) NPCCs stained with DTZ. Scale bar: 200 μm . (c) NPCC yields expressed as both total IEG (islet equivalents) and IEG per gram of NPCCs. (d) Average of viability was measured by AOPI staining after islet isolation. (e) Stimulation index for glucose-stimulated insulin secretion. (f) Glucose stimulated insulin secretion during culture. Secreted insulin after 5 days.

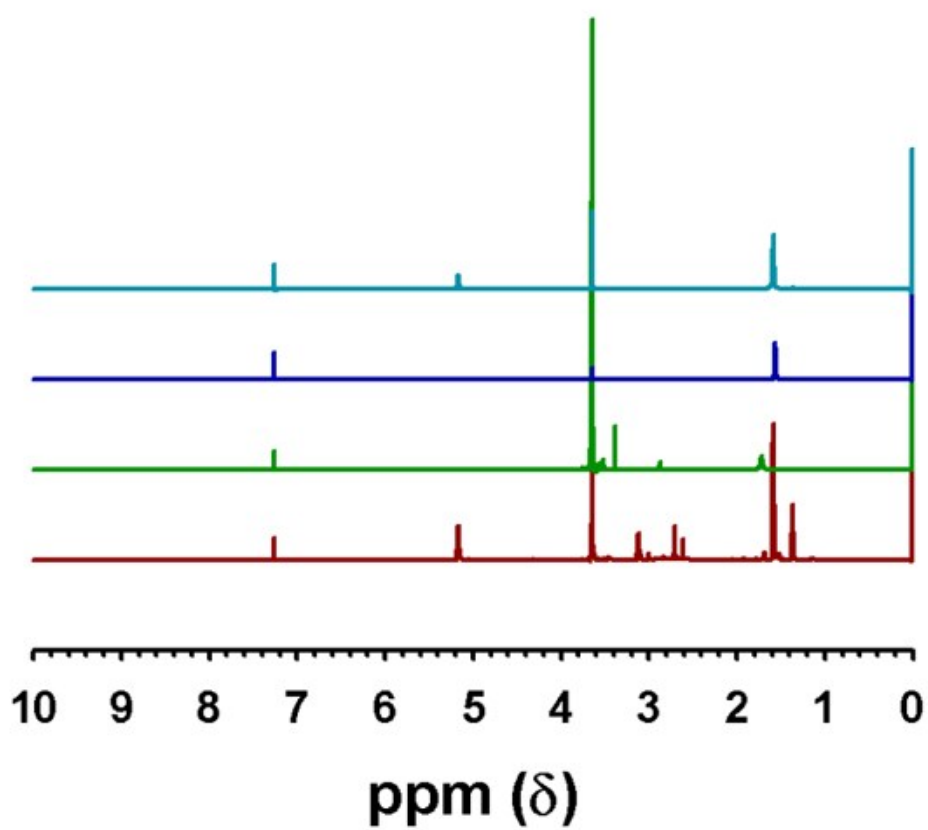


Fig S2. Verification of NHS-, NH₂-, OH- and m-PEG-b-PLA copolymers. ^1H NMR spectra of (i) NHS-, (ii) NH₂-, (iii) COOH- and (iv) m-PEG-b-PLA.

Table S1. Yield, viability, simulation index (SI), and insulin secretion of NPCCs

| Lot NO. | Total NPCCs yield (IEQ, day 5) | NPCCs yield (IEQ/gram, pancreas weight) | Viability (% , AOPI) | SI | Insulin secreted | |
|---------|--------------------------------|---|----------------------|-----|------------------|------|
| | | | | | Low | High |
| 1 | 130,552.7 | 12,553.1 | 85.1 | 1.8 | 12.2 | 16.7 |
| 2 | 80,921.0 | 17,983.0 | 92.7 | 1.2 | 28.0 | 32.8 |
| 3 | 154,846.0 | 27,651.0 | 84.0 | 1.5 | 10.2 | 15.2 |
| 4 | 141,487.0 | 27,209.0 | 90.8 | 1.5 | 21.5 | 32.7 |
| 5 | 135,299.0 | 28,787.0 | 93.7 | 2.0 | 10.7 | 17.8 |
| Aver | | 22,836.6 | 89.3 | 1.6 | 16.5 | 23.0 |
| STD | | 6,434.4 | 4.0 | 0.3 | 7.0 | 8.0 |