**Supplementary Table 1.** Pancreatic progenitor differentiation protocol *in vitro*.

|  |  |  |
| --- | --- | --- |
| **Stage of Differentiation** | **Media** | **Final Cytokine Concentration** |
| Stage 1:  Definitive Endoderm (Day 1) | MCDB131  1% Pen/Strep  1% L-Glutamine  10 mM Glucose  0.5% BSA  1.5 g/L NaHCO3 | 100 ng/mL Activin A  0.25 mM Vitamin C  2 µM CHIR99021  1 mM Rock Inhibitor |
| Stage 1:  Definitive Endoderm (Days 2-3) | MCDB131  1% Pen/Strep  1% L-Glutamine  10 mM Glucose  0.5% BSA  1.5 g/L NaHCO3 | 100 ng/mL Activin A  0.25 mM Vitamin C |
| Stage 2: Primitive Gut Tube (Days 4-6) | MCDB131  1% Pen/Strep  1% L-Glutamine  10 mM Glucose  0.5% BSA  1.5 g/L NaHCO3 | 3 ng/mL Wnt3a  0.75 µM Dorsomorphin  0.25 mM Vitamin C  50 ng/mL FGF10 |
| Stage 3: Posterior Foregut (Days 7-8) | DMEM  1% Pen/Strep  1% L-Glutamine  4.5 g/L D-Glucose  110 mg/L Sodium Pyruvate | 1% B27  200 nM LDN  0.25 mM Vitamin C  50 ng/mL FGF10  2 µM RA  0.25 µM SANT-1 |
| Stage 4: Pancreatic Progenitor (Days 9-12) | DMEM  1% Pen/Strep  1% L-Glutamine  4.5 g/L D-Glucose  110 mg/L Sodium Pyruvate | 1% B27  200 nM LDN  100 ng/mL EGF  0.25 mM Vitamin C  10 mM Nicotinamide |