Table 1S. Genes upregulated in isolated islets identified by microarray analysis.

UniGene ID	Gene symbol	Gene name	LCB
Exocrine pancreatic genes			
Hs.484588	AMY2A	Amylase, alpha 2A; pancreatic	17.3
Hs.511525	PRSS1	Protease, serine, 1 (trypsin 1)	2.8
Hs.367767	PRSS2	Protease, serine, 2 (trypsin 2)	2.9
Hs.128013	PRSS3	Protease, serine, 3 (mesotrypsin)	2.4
Hs.610926	CTRB1	Chymotrypsinogen B1	1.0
Hs.631869	CTRC	Chymotrypsin C (caldecrin)	1.4
Hs.631866	ELA2A	Elastase 2A	4.2
Hs.471034	ELA3A	Elastase 3A, pancreatic (protease E)	5.2
Hs.181289	ELA3B	Elastase 3B, pancreatic	2.9
Hs.2879	CPA1	Carboxypeptidase A1 (pancreatic)	1.0
Hs.490038	CPA2	Carboxypeptidase A2 (pancreatic)	6.5
Hs.477891	CPB1	Carboxypeptidase B1 (tissue)	16.5
Hs.501135	PNLIP	Pancreatic lipase	2.9
Hs.533258	CEL	Carboxyl ester lipase	1.5
Hs.992	PLA2G1B	Phospholipase A2, group IB (pancreas)	3.5
Hs.1340	CLPS	Colipase, pancreatic	1.6
Hs.53985	GP2	Glycoprotein 2 (zymogen granule membrane)	3.8
Hs.155097	CA2	Carbonic anhydrase II	1.0
Hs.2785	CK19	Keratin 19	0.7
Chemokine genes			
Hs.624	IL8	Interleukin 8	24.9

Hs.789	GRO1	Chemokine (C-X-C motif) ligand 1	2.9
Hs.590921	GRO2	Chemokine (C-X-C motif) ligand 2	31.0
Hs.89690	GRO3	Chemokine (C-X-C motif) ligand 3	9.2
Hs.632592	IP9	Chemokine (C-X-C motif) ligand 11	1.4
Hs.75498	MIP3A	Chemokine (C-C motif) ligand 20	2.8
Genes associated with hypoxia			
Hs.509554	HIF1A	Hypoxia-inducible factor 1, alpha subunit	1.7
Hs.131494	HIF1B	Aryl hydrocarbon receptor nuclear translocator	1.2
Hs.419240	GLUT3	Solute carrier family 2, member 3	1.4
Hs.406266	HK2	Hexokinase 2	2.2
Hs.78771	PGK1	Phosphoglycerate kinase 1	1.7
Hs.2795	LDHA	Lactate dehydrogenase A	7.5
Hs.500047	P4HA1	Proline 4-hydroxylase, alpha polypeptide I	1.4
Hs.144873	BNIP3	BCL2/adenovirus E1B 19kDa interacting protein 3	2.7
Hs.511899	EDN1	Endothelin-1	4.6
Hs.441047	ADM	Adrenomedullin	3.3
Hs.529618	TFRC	Transferrin receptor	3.4
Oxidative stress genes			
Hs.502302	CAT	Catalase	4.7
Hs.389700	MGST1	Microsomal glutathione S-transferase 1	3.6
Hs.487046	SOD2	Superoxide dismutase 2, mitochondrial	9.8
Genes associated with apoptosis			
TNF pathway associated genes			

Hs.521456	TNFRSF10B	Tumor necrosis factor receptor superfamily, member 10b	6.0
Hs.149168	TNFRSF19	Tumor necrosis factor receptor superfamily, member 19	1.9
Hs.510528	TRAF3	TNF receptor-associated factor 3	2.1
Hs.591338	TNFAIP3	Tumor necrosis factor, alpha-induced protein 3	9.0
Hs.271955	TNFAIP8	Tumor necrosis factor, alpha-induced protein 8	2.5
Hs.503704	BIRC2	Baculoviral IAP repeat-containing 2	2.0
Hs.127799	BIRC3	Baculoviral IAP repeat-containing 3	3.0
Hs.356076	BIRC4	Baculoviral IAP repeat-containing 4	1.6
Mitochondria pathway associated genes			
Hs.591054	BID	BH3 interacting domain death agonist	1.6
Hs.412196	IFT57	Intraflagellar transport 57 homolog	3.7
Hs.131226	BNIP3L	BCL2/adenovirus E1B 19kDa interacting protein 3-like	2.0
Hs.24719	MOAP1	Modulator of apoptosis 1	2.2
Hs.150749	BCL2	B-cell CLL/lymphoma 2	2.4
Hs.645511	TEGT	Testis enhanced gene transcript (BAX inhibitor 1)	1.4
Hs.283454	BNIP2	BCL2/adenovirus E1B 19kDa interacting protein 2	3.2
Hs.631672	BCL2L13	BCL2-like 13 (apoptosis facilitator)	5.0
Hs.437060	CYCS	Cytochrome c, somatic	4.0
Hs.516746	DAP3	Death associated protein 3	1.3
P53 pathway associated genes			
Hs.523968	TP53BP2	Tumor protein p53 binding protein, 2	3.1
Hs.492261	TP53INP1	Tumor protein p53 inducible nuclear protein 1	3.7
Hs.397465	HIPK2	Homeodomain interacting protein kinase 2	1.4

Other apoptosis related genes			
Hs.486063	APG5L	APG5 autophagy 5-like	2.4
Hs.193516	BCL10	B-cell CLL/lymphoma 10	3.5
Hs.486542	BCLAF1	BCL2-associated transcription factor 1	3.9
Hs.141125	CASP3	Caspase 3	3.6
Hs.9216	CASP7	Caspase 7	2.2
Hs.390736	CFLAR	CASP8 and FADD-like apoptosis regulator	3.3
Hs.4900	CIAPIN1	Cytokine induced apoptosis inhibitor 1	1.6
Hs.58488	CTNNAL1	Catenin (cadherin-associated protein), alpha-like 1	3.1
Hs.173438	FAIM	Fas apoptotic inhibitory molecule	7.4
Hs.362733	FEM1B	Fem-1 homolg b (C. elegans)	4.2
Hs.13861	FKSG2	Apoptosis inhibitor	1.2
Hs.470887	GULP1	GULP, engulfment adaptor PTB domain containing 1	4.9
Hs.90753	HTATIP2	HIV-1 Tat interactive protein 2, 30kDa	2.5
Hs.252543	IKIP	IKK interacting protein	1.2
Hs.367900	PDCD2	Programmed cell death 2	2.2
Hs.232543	PDCD4	Programmed cell death 4	3.9
Hs.553786	PDCD6	Programmed cell death 6	2.2
Hs.478150	PDCD10	Programmed cell death 10	4.7
Hs.475896	PDCD6IP	Programmed cell death 6 interacting protein	1.6
Hs.617254	PHLDA1	Pleckstrin homology-like domain, family A, member 1	5.6
Hs.645283	RTN4	Reticulon 4	4.5
Hs.510078	SGK	Serum/glucocorticoid regulated kinase	2.0

Hs.268887	STK17A	Serine/threonine kinase 17a	2.6
Mitogen-activated protein kinesis genes			
ERK pathway genes			
Hs.431850	MAPK1	Mitogen-activated protein kinase 1	2.8
Hs.411847	MAPK6	Mitogen-activated protein kinase 6	2.7
Hs.145442	MAP2K1	Mitogen-activated protein kinase kinase 1	3.8
Hs.647988	MAP2K1IP1	Mitogen-activated protein kinase kinase 1 interacting protein 1	2.4
Hs.432453	MAP3K8	Mitogen-activated protein kinase kinase kinase 8	5.4
JNK pathway genes			
Hs.484371	MAPK9	Mitogen-activated protein kinase 9	1.2
Hs.514681	MAP2K4	Mitogen-activated protein kinase kinase 4	2.8
Hs.145605	MAP3K2	Mitogen-activated protein kinase kinase kinase 2	4.3
Hs.186486	MAP3K5	Mitogen-activated protein kinase kinase kinase 5	4.1
Hs.468239	MAP4K3	Mitogen-activated protein kinase kinase kinase kinase 3	1.6
Hs.431550	MAP4K4	Mitogen-activated protein kinase kinase kinase kinase 4	2.4
Hs.130491	MAP4K5	Mitogen-activated protein kinase kinase kinase kinase 5	4.7
p38 MAPK pathway genes			
Hs.514012	MAP2K3	Mitogen-activated protein kinase kinase 3	1.4
Hs.269775	MAP3K7IP2	Mitogen-activated protein kinase kinase kinase 7 interacting protein 2	3.1
Other stress-associated genes			
Hs.518326	SERP1	Stress-associated endoplasmic reticulum protein 1	5.0
Molecular chaperone genes upregulated in the isolated islets			

Chaperonin genes			
Hs.632539	HSP60	Heat shock 60kDa protein 1 (chaperonin 60)	2.5
Hs.1197	HSP10	Heat shock 10kDa protein 1 (chaperonin 10)	3.1
Hs.189772	CCT2	Chaperonin containing TCP1, subunit 2 (beta)	1.6
Hs.421509	CCT4	Chaperonin containing TCP1, subunit 4 (delta)	1.7
Hs.1600	CCT5	Chaperonin containing TCP1, subunit 5 (epsilon)	1.5
Hs.82916	CCT6A	Chaperonin containing TCP1, subunit 6A (zeta 1)	2.1
Hs.73072	CCT6B	Chaperonin containing TCP1, subunit 6B (zeta 2)	1.4
Hs.125113	CCT8	Chaperonin containing TCP1, subunit 8 (theta)	2.0
Chaperone genes			
Hs.274402	HSPA1B	Heat shock 70kDa protein 1B	1.3
Hs.432648	HSPA2	Heat shock 70kDa protein 2	5.2
Hs.90093	HSPA4	Heat shock 70kDa protein 4	9.4
Hs.135554	HSPA4L	Heat shock 70kDa protein 4-like	2.3
Hs.605502	HSPA5	Heat shock 70kDa protein 5 (glucose-regulated protein, 78kDa)	4.1
Hs.352642	HSPA6	Heat shock 70kDa protein 6	8.8
Hs.180414	HSPA8	Heat shock 70kDa protein 8	3.8
Hs.184233	HSPA9B	Heat shock 70kDa protein 9B (mortalin-2)	2.0
Hs.534169	HSPA14	Heat shock 70kDa protein 14	3.4
Hs.445203	DNAJA1	DnaJ (Hsp40) homolog, subfamily A, member 1	3.3
Hs.368078	DNAJA2	DnaJ (Hsp40) homolog, subfamily A, member 2	4.6
Hs.513053	DNAJA4	DnaJ (Hsp40) homolog, subfamily A, member 4	5.3
Hs.131887	DNAJA5	DnaJ homology subfamily A, member 5	2.6

Hs.515210	DNAJB1	DnaJ (Hsp40) homolog, subfamily B, member 1	4.4
Hs.13852	DNAJB4	DnaJ (Hsp40) homolog, subfamily B, member 4	3.5
Hs.490745	DNAJB6	DnaJ (Hsp40) homolog, subfamily B, member 6	2.7
Hs.6790	DNAJB9	DnaJ (Hsp40) homolog, subfamily B, member 9	1.7
Hs.317192	DNAJB11	DnaJ (Hsp40) homolog, subfamily B, member 11	2.2
Hs.577426	DNAJB14	DnaJ (Hsp40) homolog, subfamily B, member 14	1.4
Hs.647643	DNAJC6	DnaJ (Hsp40) homolog, subfamily C, member 6	2.0
Hs.433540	DNAJC8	DnaJ (Hsp40) homolog, subfamily C, member 8	2.6
Hs.408577	DNAJC9	DnaJ (Hsp40) homolog, subfamily C, member 9	3.2
Hs.516632	DNAJC10	DnaJ (Hsp40) homolog, subfamily C, member 10	3.0
Hs.260720	DNAJC12	DnaJ (Hsp40) homolog, subfamily C, member 12	1.7
Hs.534196	bA16L21.2.1	DnaJ-like protein	3.3
Hs.36927	HSPH1	Heat shock 105kDa/110kDa protein 1	13.3
Hs.525600	HSPCA	Heat shock 90kDa protein 1, alpha	5.0
Hs.509736	HSPCB	Heat shock 90kDa protein 1, beta	3.7
Hs.158195	HSF2	Heat shock transcription factor 2	1.3
Hs.29169	HSPBAP1	HSPB (heat shock 27kDa) associated protein 1	1.9
Hs.352341	STCH	Stress 70 protein chaperone, microsome-associated, 60kDa	1.6
Hs.567968	CANX	Calnexin	2.9

Lower confidence bound (LCB) was used to assess differentially expressed genes.