

Supplementary Table3 DEGs between IMPC and ICNST in GSE66418

entrez id	gene-symbol	Description
Downregulation		
1360	CPB1	carboxypeptidase B1 (tissue)
3226	HOXC10	homeobox C10
2052	EPHX1	epoxide hydrolase 1, microsomal (xenobiotic)
2886	GRB7	growth factor receptor-bound protein 7
1469	CST1	cystatin SN
9123	SLC16A3	solute carrier family 16, member 3 (monocarboxylic acid transport
3561	IL2RG	interleukin 2 receptor, gamma
84189	SLITRK6	SLIT and NTRK-like family, member 6
10948	STARD3	StAR-related lipid transfer (START) domain containing 3
58485	TRAPPC1	trafficking protein particle complex 1
5315	PKM	pyruvate kinase, muscle
7791	ZYX	zyxin
84152	PPP1R1B	protein phosphatase 1, regulatory (inhibitor) subunit 1B
83483	PLVAP	plasmalemma vesicle associated protein
972	CD74	CD74 molecule, major histocompatibility complex, class II invariant
10398	MYL9	myosin, light chain 9, regulatory
1556	CYP2B7P	cytochrome P450, family 2, subfamily B, polypeptide 7 pseudogen
3678	ITGA5	integrin, alpha 5 (fibronectin receptor, alpha polypeptide)
10143	CLEC3A	C-type lectin domain family 3, member A
5589	PRKCSH	protein kinase C substrate 80K-H
100124700	HOTAIR	HOX transcript antisense RNA (non-protein coding)
1116	CHI3L1	chitinase 3-like 1 (cartilage glycoprotein-39)
3225	HOXC9	homeobox C9
1048	CEACAM5	carcinoembryonic antigen-related cell adhesion molecule 5
84759	PCGF1	polycomb group ring finger 1
2064	ERBB2	v-erb-b2 erythroblastic leukemia viral oncogene homolog 2, neur
28959	TMEM176B	transmembrane protein 176B
3212	HOXB2	homeobox B2
2878	GPX3	glutathione peroxidase 3 (plasma)
1173	AP2M1	adaptor-related protein complex 2, mu 1 subunit
389084	SNORC	chromosome 2 open reading frame 82
1292	COL6A2	collagen, type VI, alpha 2
94103	ORMDL3	ORM1-like 3 (S. cerevisiae)
4240	MFGE8	milkfat globule-EGF factor 8 protein
4924	NUCB1	nucleobindin 1
4680	CEACAM6	carcinoembryonic antigen-related cell adhesion molecule 6 (non -
1209	CLPTM1	cleft lip and palate associated transmembrane protein 1
5360	PLTP	phospholipid transfer protein
7040	TGFB1	transforming growth factor, beta 1
1072	CFL1	cofilin 1 (non-muscle)
3071	NCKAP1L	NCK-associated protein 1-like
23367	LARP1	La ribonucleoprotein domain family, member 1
3694	ITGB6	integrin, beta 6
55365	TMEM176A	transmembrane protein 176A
951	CD37	CD37 molecule
11135	CDC42EP1	CDC42 effector protein (Rho GTPase binding) 1
6525	SMTN	smoothelin
54867	TMEM214	transmembrane protein 214
5625	PRODH	proline dehydrogenase (oxidase) 1
26227	PHGDH	phosphoglycerate dehydrogenase
4921	DDR2	discoidin domain receptor tyrosine kinase 2
2534	FYN	FYN oncogene related to SRC, FGR, YES
2539	G6PD	glucose-6-phosphate dehydrogenase
4046	LSP1	lymphocyte-specific protein 1
8622	PDE8B	phosphodiesterase 8B
2316	FLNA	filamin A, alpha

6598	SMARCB1	SWI/SNF related, matrix associated, actin dependent regulator of
84299	MIEN1	migration and invasion enhancer 1
2014	EMP3	epithelial membrane protein 3
23646	PLD3	phospholipase D family, member 3
399	RHOH	ras homolog family member H
400931	MIRLET7BHG	MIRLET7B host gene (non-protein coding)
55876	GSDMB	gasdermin B
93210	PGAP3	post-GPI attachment to proteins 3
10262	SF3B4	splicing factor 3b, subunit 4, 49kDa
134549	SHROOM1	shroom family member 1
633	BGN	biglycan
8407	TAGLN2	transgelin 2
1397	CRIP2	cysteine-rich protein 2
23452	ANGPTL2	angiopoietin-like 2
8775	NAPA	N-ethylmaleimide-sensitive factor attachment protein, alpha
91316	GUSBP11	glucuronidase, beta pseudogene 11
6286	S100P	S100 calcium binding protein P
22904	SBNO2	strawberry notch homolog 2 (Drosophila)
4250	SCGB2A2	secretoglobin, family 2A, member 2
682	BSG	basigin (Ok blood group)
1284	COL4A2	collagen, type IV, alpha 2
2049	EPHB3	EPH receptor B3
23532	PRAME	preferentially expressed antigen in melanoma
5142	PDE4B	phosphodiesterase 4B, cAMP-specific
91074	ANKRD30A	ankyrin repeat domain 30A
6495	SIX1	SIX homeobox 1
11343	MGLL	monoglyceride lipase
2239	GPC4	glypican 4
90378	SAMD1	sterile alpha motif domain containing 1
23240	TMEM131L	KIAA0922
3216	HOXB6	homeobox B6
3263	HPX	hemopexin
4320	MMP11	matrix metalloproteinase 11 (stromelysin 3)
2309	FOXO3	forkhead box O3
4313	MMP2	matrix metalloproteinase 2 (gelatinase A, 72kDa gelatinase, 72kDa
57333	RCN3	reticulocalbin 3, EF-hand calcium binding domain
727936	GXYLT2	glucoside xylosyltransferase 2
11230	PRAF2	PRA1 domain family, member
222663	SCUBE3	signal peptide, CUB domain, EGF-like
4283	CXCL9	chemokine (C-X-C motif) ligand 9
5307	PITX1	paired-like homeodomain 1
5409	PNMT	phenylethanolamine N-methyltransferase
6522	SLC4A2	solute carrier family 4, anion exchanger, member 2 (erythrocyte m
920	CD4	CD4 molecule
115098	CCDC124	coiled-coil domain containing 124
728	C5AR1	complement component 5a receptor
9509	ADAMTS2	ADAM metalloproteinase with thrombospondin type 1 motif,

Upregulation

100113407	TMEM170B	transmembrane protein 170B
11162	NUDT6	nudix (nucleoside diphosphate linked moiety X)-type motif 6
130733	TMEM178A	transmembrane protein 178A
201164	PLD6	phospholipase D family, member 6
285386	TPRG1	tumor protein p63 regulated 1
5357	PLS1	plastin 1
9603	NFE2L3	nuclear factor (erythroid-derived 2)-like 3
164832	LONRF2	LON peptidase N-terminal domain and ring finger 2
2299	FOXI1	forkhead box I1
340277	FAM221A	family with sequence similarity 221, member A

5291	PIK3CB	phosphatidylinositol-4,5-bisphosphate 3-kinase, catalytic subunit
64108	RTP4	receptor (chemosensory) transporter protein 4
81578	COL21A1	collagen, type XXI, alpha 1
84305	PYM1	within bgcn homolog (Drosophila)
151126	ZNF385B	zinc finger protein 385B
163720	CYP4Z2P	cytochrome P450, family 4, subfamily Z, polypeptide 2 pseudogen
196394	AMN1	antagonist of mitotic exit network 1 homolog (S. cerevisiae)
5733	PTGER3	prostaglandin E receptor 3 (subtype EP3)
127943	FCRLB	Fc receptor-like B
205251	MTLN	long intergenic non-protein coding RNA 116
51110	LACTB2	lactamase, beta 2
9215	LARGE1	like-glycosyltransferase
2690	GHR	growth hormone receptor
286256	LCN12	lipocalin 12
389114	ZNF662	zinc finger protein 662
51090	PLLP	plasmolipin
6252	RTN1	reticulon 1
165679	SPTSSB	serine palmitoyltransferase, small subunit B
2674	GFRA1	GDNF family receptor alpha 1
4889	NPY5R	neuropeptide Y receptor Y5
5104	SERPINA5	serpin peptidase inhibitor, clade A (alpha-1 antiproteinase, antitry
8323	FZD6	frizzled family receptor 6
146556	C16orf89	chromosome 16 open reading frame 89
201475	RAB12	RAB12, member RAS oncogene family
54762	GRAMD1C	GRAM domain containing 1C
59271	EVA1C	family with sequence similarity 176, member C
122970	ACOT4	acyl-CoA thioesterase 4
124411	KRBOX5	zinc finger protein 720
144193	AMDHD1	amidohydrolase domain containing 1
29946	SERTAD3	SERTA domain containing 3
55015	PRPF39	PRP39 pre-mRNA processing factor 39 homolog (S. cerevisiae)
6542	SLC7A2	solute carrier family 7 (cationic amino acid transporter, y+ system)
1101	CHAD	chondroadherin
124975	GGT6	gamma-glutamyltransferase 6
3306	HSPA2	heat shock 70kDa protein 2
5493	PPL	periplakin
64426	SUDS3	suppressor of defective silencing 3 homolog (S. cerevisiae)
7764	ZNF217	zinc finger protein 217
83690	CRISPLD1	cysteine-rich secretory protein LCCL domain containing 1
11122	PTPRT	protein tyrosine phosphatase, receptor type, T
124739	USP43	ubiquitin specific peptidase 43
199920	FYB2	chromosome 1 open reading frame 168
4603	MYBL1	v-myb myeloblastosis viral oncogene homolog (avian)-like 1
4897	NRCAM	neuronal cell adhesion molecule
5932	RBBP8	retinoblastoma binding protein 8
158763	ARHGAP36	Rho GTPase activating protein 36
23704	KCNE4	potassium voltage-gated channel, Isk-related family, member 4
27340	UTP20	UTP20, small subunit (SSU) processome component, homolog (ye
57805	CCAR2	KIAA1967
1952	CELSR2	cadherin, EGF LAG seven-pass G-type receptor 2 (flamingo homo
27250	PDCD4	programmed cell death 4 (neoplastic transformation inhibitor)
2746	GLUD1	glutamate dehydrogenase 1
2891	GRIA2	glutamate receptor, ionotropic, AMPA 2
54332	GDAP1	ganglioside induced differentiation associated protein 1
154141	MBOAT1	membrane bound O-acyltransferase domain containing 1
55244	SLC47A1	solute carrier family 47, member 1
7031	TFF1	trefoil factor 1
10098	TSPAN5	tetraspanin 5

10512	SEMA3C	sema domain, immunoglobulin domain (Ig), short basic domain, s
540	ATP7B	ATPase, Cu++ transporting, beta polypeptide
84962	AJUBA	ajuba LIM protein
123099	DEGS2	delta(4)-desaturase, sphingolipid 2
8470	SORBS2	sorbin and SH3 domain containing 2
137075	CLDN23	claudin 23
445	ASS1	argininosuccinate synthase 1
4604	MYBPC1	myosin binding protein C, slow type
54503	ZDHHC13	zinc finger, DHHC-type containing 13
64699	TMPRSS3	transmembrane protease, serine 3
10268	RAMP3	receptor (G protein-coupled) activity modifying protein 3
128218	TMEM125	transmembrane protein 125
1950	EGF	epidermal growth factor
22822	PHLDA1	pleckstrin homology-like domain, family A, member 1
494513	PJVK	deafness, autosomal recessive 59
51232	CRIM1	cysteine rich transmembrane BMP regulator 1 (chordin-like)
5534	PPP3R1	protein phosphatase 3, regulatory subunit B, alpha
92421	CHMP4C	charged multivesicular body protein 4C
115572	TENT5B	family with sequence similarity 46, member B
1164	CKS2	CDC28 protein kinase regulatory subunit 2
84336	TMEM101	transmembrane protein 101
729085	GASK1A	family with sequence similarity 198, member A
1266	CNN3	calponin 3, acidic
51421	AMOTL2	angiomin like 2
387914	SHISA2	shisa homolog 2 (Xenopus laevis)
4036	LRP2	low density lipoprotein receptor-related protein 2
94025	MUC16	mucin 16, cell surface associated
130576	LYPD6B	LY6/PLAUR domain containing 6B
145873	MESP2	mesoderm posterior 2 homolog (mouse)
4982	TNFRSF11B	tumor necrosis factor receptor superfamily, member 11b
2731	GLDC	glycine dehydrogenase (decarboxylating)
9518	GDF15	growth differentiation factor 15
54852	PAQR5	progesterone and adipoQ receptor family member V
54898	ELOVL2	ELOVL fatty acid elongase 2
7739	ZNF185	zinc finger protein 185 (LIM domain)
79589	RNF128	ring finger protein 128, E3 ubiquitin protein ligase
80221	ACSF2	acyl-CoA synthetase family member 2
2947	GSTM3	glutathione S-transferase mu 3 (brain)
10125	RASGRP1	RAS guanyl releasing protein 1 (calcium and DAG-regulated)
2537	IFI6	interferon, alpha-inducible protein 6
5090	PBX3	pre-B-cell leukemia homeobox 3
57613	FAM234B	KIAA1467
84914	ZNF587	zinc finger protein 587
342897	NCCRP1	non-specific cytotoxic cell receptor protein 1 homolog (zebrafish)
7869	SEMA3B	sema domain, immunoglobulin domain (Ig), short basic domain, s
137872	ADHFE1	alcohol dehydrogenase, iron containing, 1
24147	FJX1	four jointed box 1 (Drosophila)
51050	PI15	peptidase inhibitor 15
8800	PEX11A	peroxisomal biogenesis factor 11 alpha
407026	MIR29C	microRNA 29c
100287482	SMKR1	uncharacterized LOC100287482
5507	PPP1R3C	protein phosphatase 1, regulatory subunit 3C
90627	STARD13	StAR-related lipid transfer (START) domain containing 13
22996	TTC39A	tetratricopeptide repeat domain 39A
94121	SYTL4	synaptotagmin-like 4
1326	MAP3K8	mitogen-activated protein kinase kinase kinase 8
18	ABAT	4-aminobutyrate aminotransferase
2628	GATM	glycine amidinotransferase (L-arginine:glycine amidinotransferase)

56477	CCL28	chemokine (C-C motif) ligand 28
60598	KCNK15	potassium channel, subfamily K, member 15
202333	CMYA5	cardiomyopathy associated 5
3754	KCNF1	potassium voltage-gated channel, subfamily F, member 1
55540	IL17RB	interleukin 17 receptor B
84419	C15orf48	chromosome 15 open reading frame 48
163589	TDRD5	tudor domain containing 5
2202	EFEMP1	EGF containing fibulin-like extracellular matrix protein 1
5570	PKIB	protein kinase (cAMP-dependent, catalytic) inhibitor beta
57758	SCUBE2	signal peptide, CUB domain, EGF-like 2
1499	CTNNB1	catenin (cadherin-associated protein), beta 1, 88kDa
1580	CYP4B1	cytochrome P450, family 4, subfamily B, polypeptide 1
51196	PLCE1	phospholipase C, epsilon 1
55638	SYBU	syntabulin (syntaxin-interacting)
143098	MPP7	membrane protein, palmitoylated 7 (MAGUK p55 subfamily memb
169981	SPIN3	spindlin family, member 3
23314	SATB2	SATB homeobox 2
89822	KCNK17	potassium channel, subfamily K, member 17
56920	SEMA3G	sema domain, immunoglobulin domain (Ig), short basic domain, s
29092	LINC00339	long intergenic non-protein coding RNA 339
130814	SLC66A3	PQ loop repeat containing 3
1522	CTSZ	cathepsin Z
776	CACNA1D	calcium channel, voltage-dependent, L type, alpha 1D subunit
9365	KL	klotho
400793	C1orf226	chromosome 1 open reading frame 226
10742	RAI2	retinoic acid induced 2
4277	MICB	MHC class I polypeptide-related sequence B
4693	NDP	Norrie disease (pseudoglioma)
8614	STC2	stanniocalcin 2
9410	SNRNP40	small nuclear ribonucleoprotein 40kDa (U5)
100506409	ELOVL2-AS1	ELOVL2 antisense RNA 1 (non-protein coding)
203328	SUSD3	sushi domain containing 3
3855	KRT7	keratin 7
135932	TMEM139	transmembrane protein 139
387723	C10orf143	uncharacterized LOC387723
120224	TMEM45B	transmembrane protein 45B
3860	KRT13	keratin 13
10267	RAMP1	receptor (G protein-coupled) activity modifying protein 1
92747	BPIFB1	BPI fold containing family B, member 1
253190	SERHL2	serine hydrolase-like 2
116362	RBP7	retinol binding protein 7, cellular
5067	CNTN3	contactin 3 (plasmacytoma associated)
267	AMFR	autocrine motility factor receptor, E3 ubiquitin protein ligase
79679	VTCN1	V-set domain containing T cell activation inhibitor 1
388743	CAPN8	calpain 8
346389	MACC1	metastasis associated in colon cancer 1
25984	KRT23	keratin 23 (histone deacetylase inducible)
8825	LIN7A	lin-7 homolog A (C. elegans)
100506492	DSCAM-AS1	DSCAM antisense RNA 1 (non-protein coding)
51473	DCDC2	doublecortin domain containing 2
6019	RLN2	relaxin 2
341640	FREM2	FRAS1 related extracellular matrix protein 2
3292	HSD17B1	hydroxysteroid (17-beta) dehydrogenase 1
92304	SCGB3A1	secretoglobin, family 3A, member 1
7980	TFPI2	tissue factor pathway inhibitor 2
5241	PGR	progesterone receptor
285489	DOK7	docking protein 7
4886	NPY1R	neuropeptide Y receptor Y1

11283	CYP4F8	cytochrome P450, family 4, subfamily F, polypeptide 8
55897	MESP1	mesoderm posterior 1 homolog (mouse)
221662	RBM24	RNA binding motif protein 24
290	ANPEP	alanyl (membrane) aminopeptidase
3866	KRT15	keratin 15
54102	CLIC6	chloride intracellular channel 6
283078	MKX	mohawk homeobox
1733	DIO1	deiodinase, iodothyronine, type I
79153	GDPD3	glycerophosphodiester phosphodiesterase domain containing 3
10202	DHRS2	dehydrogenase/reductase (SDR family) member 2