

**Supplementary Table 3. Up regulated genes in 4 dpf zebrafish embryos at 0.5hpi with 100 nM recombinant human insulin**

Gene	Gene Id	Fold change	p-value
si:dkey-114b16.3	ENSDARG00000092613	17.14822032	0.009535067
si:dkey-206d17.11	ENSDARG00000093742	15.6682756	0.004599184
si:dkeyp-73e12.5	ENSDARG00000091882	14.0386792	0.019390495
si:dkey-85n7.7	ENSDARG00000095893	13.96724038	0.027790651
aicda	ENSDARG00000015734	13.4186241	0.046493001
BX255896.1	ENSDARG00000037342	12.83145427	0.039783743
si:dkey-108f8.6	ENSDARG00000093592	11.70947951	0.040625087
BX908386.1	ENSDARG00000040740	10.08136772	0.009574004
KCNJ4	ENSDARG00000068110	8.068857054	0.017987115
SNORD31	ENSDARG00000080531	7.056443604	0.012783559
CR382294.1	ENSDARG00000093254	6.339605104	0.004035267
CR354549.1	ENSDARG00000086857	5.168077861	0.022601619
si:ch211-133i5.6	ENSDARG00000093105	4.609533958	0.008323483
si:dkeyp-104b3.21	ENSDARG00000094544	4.594205975	0.029957206
si:ch211-76m11.16	ENSDARG00000095886	4.228609693	0.008826672
SNORA73	ENSDARG00000083400	4.226410692	0.039651342
KCNA10 (1 of 2)	ENSDARG00000076854	3.979548446	0.018076837
si:ch211-219a15.4	ENSDARG00000068951	3.94837207	0.002190652
OGFR (4 of 4)	ENSDARG00000057933	3.650005464	0.023417558
si:dkey-7m11.1	ENSDARG00000094957	3.166164961	0.003319129
admp	ENSDARG00000025372	3.064638006	0.044232831
cry5	ENSDARG00000019498	3.054142475	0.004863803
ZNF32 (4 of 4)	ENSDARG00000087453	3.019015026	0.006144803
wdr76	ENSDARG00000053554	2.954483171	0.000161631
CR759879.1	ENSDARG00000088069	2.91438762	0.042072717
	ENSDARG00000025311	2.906929402	0.002896517
si:dkey-189n19.3	ENSDARG00000094331	2.857896769	0.049619571
si:ch73-25i22.2	ENSDARG00000088549	2.851459248	0.006590145
si:ch211-276a17.5	ENSDARG00000096398	2.834634329	0.000990795
CR753817.1	ENSDARG00000002508	2.756206735	0.000562898
FP074874.1	ENSDARG00000089047	2.743407223	0.000193641
si:dkey-81p22.12	ENSDARG00000094560	2.743022279	0.044173908
mir726	ENSDARG00000082495	2.707140735	0.028726288
CU571315.2	ENSDARG00000095253	2.671072083	0.044012253
si:dkey-104n9.1	ENSDARG00000093042	2.556825399	1.66E-05
si:ch211-207m11.3	ENSDARG00000093969	2.520186516	0.010488269
si:dkey-222e15.4	ENSDARG00000095280	2.506049937	0.024119867
si:ch211-152i15.3	ENSDARG00000093424	2.390885385	0.014586576
CABZ01075275.1	ENSDARG00000089198	2.387469975	2.56E-05
kenk9	ENSDARG00000063560	2.38324076	0.00441971
itga2b	ENSDARG00000018687	2.372017978	0.025347388
si:dkey-222h21.8	ENSDARG00000094344	2.360788215	0.047080901
si:dkey-9c18.6	ENSDARG00000096588	2.35569745	0.044738674
	ENSDARG00000094167	2.346605356	0.028393478
si:dkeyp-82a1.2	ENSDARG00000094192	2.314164167	0.029581592
	ENSDARG00000092675	2.292743225	0.010060333

cybasc3b	ENSDARG00000028257	2.291711808	0.031541222
si:dkeyp-46h3.1	ENSDARG00000094407	2.28519679	0.027436844
si:ch211-161h7.5	ENSDARG00000093044	2.273808916	0.039114659
si:dkey-14d8.6	ENSDARG00000045835	2.252601861	0.046776381
CR847504.1	ENSDARG00000089224	2.248141904	0.043375193
hs3st3b1a	ENSDARG00000059594	2.243842703	0.000447968
C19H5orf49	ENSDARG00000074049	2.233059034	0.041449037
iqch	ENSDARG00000015476	2.221477495	0.035360805
cry-dash	ENSDARG00000002396	2.200173577	0.008564075
SNORD60	ENSDARG00000086351	2.176939494	0.038322463
si:dkeyp-33e11.1	ENSDARG00000092254	2.167606219	0.014177146
ddb2	ENSDARG00000041140	2.127288552	0.001298796
xpc	ENSDARG00000039754	2.083128387	0.036653082
NAT16	ENSDARG00000086222	2.0616209	0.007541788
mkks	ENSDARG00000016139	2.038668659	0.014054033
BX119910.8	ENSDARG00000077539	2.027314501	0.007268935
PDE5A (2 of 2)	ENSDARG00000056806	1.988764147	0.002798545
SNORA32	ENSDARG00000081937	1.968580544	0.040688572
si:ch73-6k14.2	ENSDARG00000096031	1.965660277	0.00036431
zgc:171673	ENSDARG00000073800	1.949120304	4.65E-05
tubb4b	ENSDARG00000091444	1.94491209	0.003576507
si:dkey-18a10.3	ENSDARG00000090814	1.925728612	0.031182575
CR352249.1	ENSDARG00000054196	1.924701655	0.028323844
SHISA5 (2 of 2)	ENSDARG00000071543	1.910809799	0.000206942
si:ch211-222m2.1	ENSDARG00000091887	1.906442156	0.046019981
si:ch211-225b11.1	ENSDARG00000002405	1.905815966	0.000393888
zufsp	ENSDARG00000059983	1.903906052	0.000187703
si:ch73-191k20.4	ENSDARG00000093438	1.893442303	0.00198396
dhrs12	ENSDARG00000011770	1.891233605	1.37E-06
BX927362.1	ENSDARG00000087873	1.88769677	6.80E-06
SLC24A2 (2 of 2)	ENSDARG00000042988	1.88692609	1.86E-08
slc1a8b	ENSDARG00000032465	1.88445595	0.038666022
ftr51	ENSDARG00000029105	1.859623179	0.001094399
ercc6	ENSDARG00000075612	1.85561808	4.68E-05
PER2-2	ENSDARG00000078099	1.853004581	0.039446192
klhl42	ENSDARG00000006011	1.849940749	0.007991389
AL929252.2	ENSDARG00000036152	1.84511893	0.002948705
CR339053.3	ENSDARG00000078762	1.830650675	0.009905339
aldh3b2	ENSDARG00000035606	1.829734958	0.020393803
msmo1	ENSDARG00000055876	1.828663046	0.012399549
wu:fj41e11	ENSDARG00000038198	1.818838166	0.006793114
si:ch211-161m3.2	ENSDARG00000096058	1.809708818	0.026211773
lonrf1	ENSDARG00000075048	1.802686164	0.012844958
si:ch211-12e13.4	ENSDARG00000095477	1.797996736	0.040710877
zgc:92658	ENSDARG00000092792	1.796984197	0.021735964
glcea	ENSDARG00000005095	1.791833832	0.000528301
CAMKK1 (2 of 2)	ENSDARG00000015134	1.783503306	0.00024585
FBXO10 (1 of 2)	ENSDARG00000061936	1.783046809	0.039971763
ptgdsb	ENSDARG00000027088	1.777424052	1.26E-05
5S_rRNA	ENSDARG00000090370	1.776866085	0.043337463

zgc:162971	ENSDARG00000070156	1.776366075	0.00206553
lrrc8da	ENSDARG00000062113	1.773579278	0.015578537
CHCHD4 (2 of 2)	ENSDARG00000040707	1.771619027	0.016134035
zgc:174310	ENSDARG00000076442	1.766672823	0.00062422
si:ch211-242e8.1	ENSDARG00000069038	1.762136023	0.004260043
zgc:65997	ENSDARG00000043562	1.759114427	0.000647274
guca1e	ENSDARG00000078384	1.743086037	0.009133378
rerglb	ENSDARG00000054324	1.737055079	0.033549555
si:ch211-286110.2	ENSDARG00000096172	1.736135162	0.034305789
zgc:64002	ENSDARG00000022370	1.726612574	0.027030275
arr3a	ENSDARG00000056511	1.72025831	5.27E-07
PROCA1	ENSDARG00000069823	1.714041454	0.030183966
si:ch73-144m15.3	ENSDARG00000086971	1.707341384	0.008935873
wdr74	ENSDARG00000061993	1.698092776	0.002882787
per2	ENSDARG00000034503	1.695224321	0.013673929
jazf1a	ENSDARG00000036243	1.694197923	0.012957028
rlbp1b	ENSDARG00000045808	1.691610834	0.000201864
si:ch211-209118.4	ENSDARG00000090847	1.689237172	0.00106013
tefa	ENSDARG00000039117	1.688714454	2.84E-06
cabp5b	ENSDARG00000028485	1.688084958	0.002339168
paqr5a	ENSDARG00000041145	1.682532337	0.01738437
pcgf5a	ENSDARG00000071007	1.680648484	0.018886706
ebp	ENSDARG00000046098	1.674805591	0.032444134
si:ch211-132b12.7	ENSDARG00000068374	1.673722333	0.008471936
scd	ENSDARG00000033662	1.671597608	0.02494975
hebp2	ENSDARG00000042630	1.670731628	0.000149295
CR385022.1	ENSDARG00000079569	1.667044968	0.021521662
KCNG4 (2 of 2)	ENSDARG00000051892	1.66663055	0.029478037
si:dkey-238o13.4	ENSDARG00000078847	1.663960724	0.012227875
zgc:172128	ENSDARG00000077683	1.663494081	0.01837685
pax1a	ENSDARG00000008203	1.661396215	0.027029787
fam213b	ENSDARG00000029795	1.64950608	0.032966907
BX088525.2	ENSDARG00000043357	1.645631504	0.035003476
COQ10A (2 of 2)	ENSDARG00000095987	1.64227353	0.036591863
ogg1	ENSDARG00000060002	1.639581339	0.021037384
hdhd3	ENSDARG00000053934	1.63670878	0.015525157
RPUSD2	ENSDARG00000060992	1.635515641	0.019690818
cyp27c1	ENSDARG00000092660	1.631680333	0.003709782
kti12	ENSDARG00000054301	1.627292284	0.027821518
nkx2.1a	ENSDARG00000010461	1.623387651	0.040396428
hmgcra	ENSDARG00000052734	1.61920669	0.038695695
si:dkey-27n6.11	ENSDARG00000094245	1.61792456	0.003107026
USP21	ENSDARG00000094280	1.613551868	0.00167585
btr05	ENSDARG00000074813	1.610654679	0.041341107
hgfa	ENSDARG00000045544	1.606837049	0.014241077
dus11	ENSDARG00000089260	1.60251875	0.003151031
si:ch211-76m11.3	ENSDARG00000092284	1.601173404	0.035915346
BX571853.2	ENSDARG00000055288	1.597115796	0.022324595
zgc:113209	ENSDARG00000043808	1.593850203	0.006701301
kbtbd7	ENSDARG00000078001	1.59341257	0.021301019

gpatch4	ENSDARG00000091931	1.589445237	0.003507476
RAB33A	ENSDARG00000057394	1.585485037	0.014338899
	ENSDARG00000062221	1.5838969	0.007282546
tada2b	ENSDARG00000003769	1.579723349	0.009024427
si:dkey-240n22.6	ENSDARG00000089296	1.571675777	0.00634744
pdp2	ENSDARG00000058571	1.57076271	0.027542395
sdr42e1	ENSDARG00000003397	1.568387215	0.04778773
dcps	ENSDARG00000009862	1.567441208	0.001914603
chchd4	ENSDARG00000033376	1.566159636	0.002794158
NINL	ENSDARG00000075119	1.565805132	0.04662361
lin52	ENSDARG00000070833	1.562537132	0.016462564
smyd4	ENSDARG00000060983	1.559343708	0.010446572
PSMB10	ENSDARG00000043781	1.55834066	0.013630593
MRAS (1 of 2)	ENSDARG00000062865	1.55443036	0.000241966
gemin4	ENSDARG00000041252	1.553611721	0.009597734
C11H1orf50	ENSDARG00000071211	1.553348331	0.036900191
CH211-262A22.4	ENSDARG00000055385	1.551624244	0.008551211
fancg	ENSDARG00000024967	1.549810352	0.02290781
slc25a47a	ENSDARG00000059923	1.54912886	0.009079556
CT583625.2	ENSDARG00000090612	1.54530627	0.008963784
slc1a9	ENSDARG00000054836	1.544684547	0.039237691
neil1	ENSDARG00000018061	1.543676226	0.01736624
TRMT10A	ENSDARG00000036678	1.543249597	0.03657477
ppan	ENSDARG00000022232	1.542701557	0.005624037
zgc:113054	ENSDARG00000053483	1.542492635	0.000506229
METTL18	ENSDARG00000074588	1.541223364	0.019596468
cntnap2b	ENSDARG00000074558	1.540855928	0.020404816
pif1	ENSDARG00000020289	1.539394321	0.044555967
CDR2 (1 of 2)	ENSDARG00000035952	1.536428687	0.034230754
mylipb	ENSDARG00000055118	1.535803911	0.010785469
TDRKH	ENSDARG00000053474	1.53567507	0.001584055
fezf2	ENSDARG00000070677	1.533846744	0.002553476
ZBTB3 (2 of 2)	ENSDARG00000036235	1.531895965	0.046125532
FAIM2	ENSDARG00000039444	1.527972627	0.005573155
rbp4l	ENSDARG00000044684	1.527589627	0.0001432
mfap4	ENSDARG00000090783	1.526530922	0.044341
si:ch1073-174d20.2	ENSDARG00000079651	1.526080065	0.021421851
gls2	ENSDARG00000069095	1.526052964	0.009642714
CABZ01071911.1	ENSDARG00000089931	1.523578884	0.047389863
commd5	ENSDARG00000029660	1.521653536	0.022465351
alg12	ENSDARG00000041199	1.521545438	0.015311326
CABZ01041002.1	ENSDARG00000068104	1.518094283	0.033819659
eif4a1a	ENSDARG00000092115	1.517754572	0.042475998
ppp1r3b	ENSDARG00000044691	1.516473693	0.009196579
zgc:73075	ENSDARG00000009637	1.515561613	0.000120962
zbtb25	ENSDARG00000042383	1.515488968	0.024694501
WDR6	ENSDARG00000078571	1.513347761	0.013106072
CR942805.1	ENSDARG00000075067	1.512878013	0.031333965
stambp11	ENSDARG00000003085	1.512438836	0.017642393
cox11	ENSDARG00000061004	1.510376499	0.006201683

qdpra	ENSDARG00000040190	1.510095064	0.017725618
sfrp1b	ENSDARG00000057678	1.507866011	0.021054989
si:ch73-389k6.1	ENSDARG00000043812	1.505061466	0.005134596
nip7	ENSDARG00000059075	1.503784026	0.006702132
C24H7orf50	ENSDARG00000045254	1.502451434	0.019769695
taf5l	ENSDARG00000025808	1.501402338	0.013201041