

## Additional File 2. Accession information for the *Dact* genes

### Dact1

Species	Sequence sources (location, ENSEMBL ID, Genbank ID)
<i>Homo sapiens</i>	chr14 ENSP00000337439
<i>Mus musculus</i>	chr12 ENSMUSP00000117169, NP_001177395
<i>Bos Taurus</i>	chr10 ENSBTAP00000025871
<i>Canis familiaris</i>	chr8 ENSCAFP00000022721
<i>Loxodonta africana</i>	super contig 2755, scaffold 9 ENSLAFP00000006293
<i>Monodelphis domestica</i>	chr1 ENSMODP00000010125
<i>Ornithorhynchus anatinus</i>	Exons 2-4: super contig 214 ENSOANP00000026117, super contig 164635 ENSOANP00000012266
<i>Gallus gallus</i>	chr5 ENSGALP00000019594, NP_001038157
<i>Melleagris gallopavo</i>	Exons 2-4: chr5 ENSMGAP00000014386
<i>Taeniopygia guttata</i>	chr5 ENSTGUP00000013409, XP_002200415
<i>Anas platyrhynchos</i>	Exons 2-4: super contig 626 ENSAPLP00000006988
<i>Melopsittacus undulatus</i>	JH556483
<i>Anolis carolinensis</i>	GL343459, scaffold 5, scaffold 29, chr2 ENSACAP00000014546, XP_003227188
<i>Python molurus</i>	Exons2-3: contig 26513843, contig 26939700
<i>Chrysemys picta bellii</i>	JH584658.1
<i>Pelodiscus sinensis</i>	Exons2-4: JH212506.1 ENSPSIP00000000543
<i>Xenopus laevis</i>	1a Q8JJ48 1b Q8QG92
<i>Xenopus tropicalis</i>	Scaffold 68 ENSXETP00000026164
<i>Rana catesbeiana</i>	Exon 4: EST GO472221
<i>Latimeria chalumnae</i>	contig 002619, contig 002618, contig 002617, JH126564 ENSLACP00000021405
<i>Lepisosteus oculatus</i>	LG7
<i>Danio rerio</i>	chr17 ENSDARP00000058000, NP_999896
<i>Pimephales promelas</i>	EST DT209342.1, DT203450.1
<i>Ictalurus punctatus</i>	Exon 4 (partial): EST FD292185.1
<i>Salmo salar</i>	EST DW568517, DY733227, DY706739, DW582161
<i>Oncorhynchus mykiss</i>	Exon1: EST CX026758, Exons 2-4: EST CX028139, CX036471, CX036458
<i>Gadus morhua</i>	Exon2: contig 572298/contig 143687, Exon4: scaffold 909
<i>Gasterosteus aculeatus</i>	grXV genomic, EST DW609376
<i>Oryzias latipes</i>	Exons 2-4: chr22 ENSORLP00000012735, EST AM331483
<i>Oreochromis niloticus</i>	GL831368 ENSONIP00000014775, probably wrong splices
<i>Xiphophorus maculatus</i>	Exons 2-4: JH557083 ENSXMAP00000004931 (ex3-4 no intron)
<i>Squalus acanthias</i>	Exon 4: EST EB688325.1
<i>Callorhynchus milii</i>	Exon 2: AAVX01221604, Exon 3: AAVX01236760, Exon 4: AAVX01179725, AAVX01276763

### Dact2

Species	Sequence sources (location, ENSEMBL ID, Genbank ID)
<i>Homo sapiens</i>	chr6 ENSP00000355760
<i>Mus musculus</i>	chr17 ENSMUSP00000051638 NP766414
<i>Bos Taurus</i>	Exons 2-4: chr9 ENSBTAP00000042173
<i>Canis familiaris</i>	chr1 ENSCAFP00000001234 & genomic
<i>Monodelphis domestica</i>	chr2 ENSMODP00000029202, XP001381611.1
<i>Ornithorhynchus anatinus</i>	super contig 20694, super contig 22096 ENSOANP00000022342, XP001512031
<i>Gallus gallus</i>	chr3 ENSGALP00000018395
<i>Meleagris gallopavo</i>	Exons 2-4: chr2 ENSMGAP00000012895
<i>Taeniopygia guttata</i>	chr3 ENSTGUP00000009966; XP_002189614
<i>Anas platyrhynchos</i>	Exons2-4: scaffold 530, KB742905 ENSAPLP00000016017
<i>Melopsittacus undulatus</i>	JH556595
<i>Anolis carolinensis</i>	scaffold 549, contig 30595, chr1 ENSACAP00000008321, XP_003215934
<i>Python molurus</i>	Exons2-4: contig 24659227, contig 26563497, contig 26659464, contig 26922077
<i>Chrysemys picta bellii</i>	JH584758
<i>Pelodiscus sinensis</i>	JH208515 ENSPSIP00000007465

<i>Protopterus aethiopicus</i>	Exons 1-3: cDNA FL669463
<i>Latimeria chalumnae</i>	contig 230613, contig 230612, contig 230611, JH129292 ENSLACP00000006683
<i>Lepisosteus oculatus</i>	LG16
<i>Danio rerio</i>	chr13 ENSDARP00000078756, NP_001071262
<i>Osmerus mordax</i>	Exons 1-3: EST EL546145
<i>Gadus morhua</i>	scaffold 609 ENSGMOP00000017472, contig 360826
<i>Takifugu rubripes</i>	scaffold 53 ENSTRUP00000045386, SINFRUP000000135666
<i>Tetraodon nigroviridis</i>	chr17 ENSTNIP00000016084
<i>Gasterosteus aculeatus</i>	groupVI ENSGACP00000004724
<i>Oryzias latipes</i>	chr15, cDNA DK099130, cDNA DK090936
<i>Oreochromis niloticus</i>	GL831145 ENSONIP00000012881
<i>Xiphophorus maculatus</i>	JH556663 ENSXMAP00000008211
<i>Torpedo californica</i>	Exons3-4: EST EW689921
<i>Callorhinchus milii</i>	Exon 2: AAVX01057442, Exon 4: AAVX01184388, AAVX01179725

### Dact3

Species	Sequence sources (location, ENSEMBL ID, Genbank ID)
<i>Homo sapiens</i>	chr19 ENSP00000375783
<i>Mus musculus</i>	chr7 ENSMUSP00000104133, XP_990410
<i>Bos Taurus</i>	chr18 ENSBTAP00000051010
<i>Loxodonta africana</i>	s4446 ENSLAFP00000016003
<i>Monodelphis domestica</i>	Exons2-4: chr4 XP_001373542
<i>Ornithorhynchus anatinus</i>	contig 69853 ENSOANP00000031882, contig 289003, XP_001505988
<i>Anolis carolinensis</i>	Exons2-4: AAWZ02039310 ENSACAP00000018986, S1268
<i>Python molurus</i>	Exons2-4: contig 26582260
<i>Chrysemys picta bellii</i>	JH584472.1
<i>Pelodiscus sinensis</i>	(ex4) JH209944.1
<i>Xenopus laevis</i>	s110 s13803
<i>Xenopus tropicalis</i>	s31, GL172662 ENSXETESTP00000009226, ESTs CX826750, BU911207
<i>Latimeria chalumnae</i>	contig 190000, contig 190013, contig 190018, contig 190022, JH128225 ENSLACP00000010772
<i>Lepisosteus oculatus</i>	LG2
<i>Callorhinchus milii</i>	ex4 AAVX01159308.1 rev compl

### Dact3a

<i>Danio rerio</i>	chr18 ENSDARP00000105187, XP_001340996, EST BM096490, EB953635
<i>Pimephales promelas</i>	EST DT126141, DT173940.1
<i>Gadus morhua</i>	Exons 2-4: scaffold 3150 ENSGMOP00000014338
<i>Takifugu rubripes</i>	scaffold 165 SINFRUP000000177769
<i>Tetraodon nigroviridis</i>	scaffold 14702 chr16 GSTENT00022091001 CAG02860 N term trimmed
<i>Gasterosteus aculeatus</i>	groupI ENSGACP00000008819, EST DN705293, DT983310
<i>Oryzias latipes</i>	chr13 UTOLAPRE05100114910, EST DK202428, AM343964, DC260713
<i>Oreochromis niloticus</i>	GL831147
<i>Xiphophorus maculatus</i>	JH556880 ENSXMAP00000000994

### Dact3b

<i>Danio rerio</i>	chr10 ENSDARP00000108748, XP_001345794
<i>Oncorhynchus mykiss</i>	3a or b, Exon 4: EST CX260816 3b, Exons 2,4: BX299645
<i>Gadus morhua</i>	Exons 1,4: s4368
<i>Takifugu rubripes</i>	Exons 1,2,4: scaffold 455
<i>Tetraodon nigroviridis</i>	chr7
<i>Oryzias latipes</i>	chr14, EST AM364417
<i>Haplochromis burtani</i>	EST DY626400
<i>Oreochromis niloticus</i>	Exons 1,4: GL831515, EST GR625261

### Dact4

Species	Sequence sources (location, ENSEMBL ID, Genbank ID)
<i>Anolis carolinensis</i>	GL343928/s1206 ENSACAP00000023296, contig 40816
<i>Python molurus</i>	Exons2-4: contig 26563039, contig 26110406, contig 25444438, contig 24942884
<i>Chrysemys picta bellii</i>	JH584543
<i>Pelodiscus sinensis</i>	JH206113 start exon 4 probably wrong

<i>Latimeria chalumnae</i>	contig 015702
<i>Lepisosteus oculatus</i>	Exons 2-4: LG28
<i>Danio rerio</i>	chr14 ENSDARP00000107587 and ESTs
<i>Pimephales promelas</i>	EST DT209032, DT154900, DT207848
<i>Oncorhynchus tshawytscha</i>	EST EL555352
<i>Gadus morhua</i>	scaffold 3610 contig76676
<i>Takifugu rubripes</i>	scaffold 187
<i>Tetraodon nigroviridis</i>	chr1
<i>Gasterosteus aculeatus</i>	groupIV, EST DN714255, DT994919
<i>Oryzias latipes</i>	chr10 UTOLAPRE05100112289, EST BJ526132
<i>Perca flavescens</i>	EST GO571064
<i>Dicentrarchus labrax</i>	EST FM009490
<i>Oreochromis niloticus</i>	GL831165
<i>Sparus aurata</i>	AM955614
<i>Xiphophorus maculatus</i>	Exon 1: scaffold AGAJ01047724, Exons 2-4: JH556834
<i>Torpedo californica</i>	EST EW689921
<i>Leucoraja erinacea</i>	EST CO049720
<i>Callorhynchus milii</i>	Exon 4: AAVX01316550.1
<b>Dact4r</b>	
<i>Lepisosteus oculatus</i>	LG14, no introns
<i>Danio rerio</i>	chr24, EST DV594105

### **Agnathan Dacts**

Species	Sequence sources (location, ENSEMBL ID, Genbank ID)
<i>Petromyzon marinus</i>	dactA Exons 3+4: contig 36439=GL476511 dactB Exons 3-4: super contig 37220, contig 20195 dactD Exon 4: contig 54804 Further sequences: contig 2706, contig 46758, contig 19740
<i>Lethenteron japonicum</i>	dactA: KE993709 dactB: KE993739 dactC Exons 2-4: KE993726 (similar exon 4 sequences on KE999188/KE99520) dactD Exon 4: KE994909 orphan Exon 1: APJL01152884/APJL01160608
<i>Branchiostoma floridae</i>	cDNA_XP_002606360, EST BW773332