

<i>Gallus gallus</i>	TGGCCACGTTGGAAACCTTATGGCTCCTGATTCTGTCTCAGATGATGGTCTGAACATCTA
<i>Monodelphis domestica</i>	AGATCAGGATGGAACCATTTATGCCCTAGATTAGTTTCAGATGT---TCTGAATTTTTA
<i>Macropus eugenii</i>	NN
<i>Wallabia bicolor</i>	NN

<i>Gallus gallus</i>	CAGAGGGATTCTCAATATTCTGGAGCTCAGTCTGAAGAAGATGCAGCATTACATACAGTAT
<i>Monodelphis domestica</i>	TAAACATAGCCTTAACATATTGGAAATTAGTATCAA-AAGA--CAAAAACCCCTACAGTTT
<i>Macropus eugenii</i>	NN
<i>Wallabia bicolor</i>	NN

<i>Gallus gallus</i>	ACAGGAG
<i>Monodelphis domestica</i>	GCCAGAG
<i>Macropus eugenii</i>	NNNNNNN
<i>Wallabia bicolor</i>	NNNNNNN

Pairwise SIM alignments to chicken sequence

<i>Gallus gallus</i>	GCTGGGATTGGAGGTATTTGTAACACAACGTATGCAATTCAAGAAAACAAGAAAGCAAAC
<i>Monodelphis domestica</i>	TCTAGAATTGGTGATCTATTTACCACAACATATTTTATTGAAGAAGATATGAAAGCTGAT
<i>Macropus eugenii</i>	NN
<i>Wallabia bicolor</i>	NN

<i>Gallus gallus</i>	CTAGTTGATGTGACCAAATCCAAGGACCTGAACAGTTGTGAAGAGAAAGTCCAAGTGGTC
<i>Monodelphis domestica</i>	TTTGTTTCTATAACTAGA----AGAACTTAAATAACT--GAGGAGAAGGTCAAATGAAT
<i>Macropus eugenii</i>	NN
<i>Wallabia bicolor</i>	NN

<i>Gallus gallus</i>	ACAGGTTTCAGCATACACT
<i>Monodelphis domestica</i>	TCTGGTTCTACTTATTCT
<i>Macropus eugenii</i>	NNNNNNNNNNNNNNNNNNNN
<i>Wallabia bicolor</i>	NNNNNNNNNNNNNNNNNNNN

Pairwise SIM alignments to chicken sequence

<i>Gallus gallus</i>	AGAAACAAGAATTCCCGGGCAACTGCTACCTATAATTACAAAATTAAATACACTCATAAT
<i>Monodelphis domestica</i>	CCCAACAGAAATTCCCTAGGCCACT-----TCAAGTTAAAAAATAAAA---ACTTATATC
<i>Macropus eugenii</i>	NN
<i>Wallabia bicolor</i>	NN

<i>Gallus gallus</i>	GAAG---CTGTAATCACACAAGCTGAAGTCGAGGAAGTCCACCAGTTTACACCTTTCCA
<i>Monodelphis domestica</i>	AAAGAGTCCTTGAGTCTTTCAAGCTGAAGTTCATGAAATAGATCAATTTGTACCCTTTAA
<i>Macropus eugenii</i>	NN
<i>Wallabia bicolor</i>	NN

<i>Gallus gallus</i>	TGAGATAAC
<i>Monodelphis domestica</i>	TAAGCTGAC
<i>Macropus eugenii</i>	NNNNNNNNN
<i>Wallabia bicolor</i>	NNNNNNNNN

Pairwise SIM alignments to chicken sequence

<i>Gallus gallus</i>	GCGCTACCTTTT-GGATTTACTTCCTGCA-GCAGCCAGTCACCGTTCCTGA--GATTCT
<i>Monodelphis domestica</i>	GTGCTTATTTT-AGATATACTCTCTGCCTGTGGCCTGT-ATAGAAGACTTGTTGGTTCT
<i>Macropus eugenii</i>	GTGCATATTTT-TAGATATTCTCCCTGCC-ATGGCCAGT-ATAGAAGACTAGGTGGTTCT
<i>Wallabia bicolor</i>	NN

<i>Gallus gallus</i>	TGAGGCATAAAATGGAAAGGCAAGAGCTCACCAACTGGGAAATAGCTCAGACAGTGCTTG
<i>Monodelphis domestica</i>	CAGGGTATAAAATTGAAAAGGAAGAAATTAGAGAATGGGAGGCAGCTCAGGCTATACTCC
<i>Macropus eugenii</i>	CAAGGTATAAAATTGAAAAGGCAGAAATTAGAGAATGGGAGGCAGTTCAGGCTCAACTCT
<i>Wallabia bicolor</i>	NN

<i>Gallus gallus</i>	TG
<i>Monodelphis domestica</i>	TG
<i>Macropus eugenii</i>	TG
<i>Wallabia bicolor</i>	NN

Pairwise SIM alignments to chicken sequence

<i>Gallus gallus</i>	CTTTGAAAGCCCTTGGAATGTAGGACATCCAGCCAGCATCAAGCACATCAAGAAA-TTT
<i>Monodelphis domestica</i>	CTTTGAAATCCATAGGGAATAAAGGACATGGGGCCAGTCTGAATTAGAACAGAAAAGTTC
<i>Macropus eugenii</i>	CTTTGAAAGCCATGGGGGATGAAGAACATGTAGCCAGTCTGAATCAGAACAGCAA-GTTC
<i>Wallabia bicolor</i>	CTTTGAAAGCCATGGGGGATGAAGAACATGTAGCCAGTCTGAATCAGAACAGCAA-GTTC
	***** *

<i>Gallus gallus</i>	TTGCCCGGCTATGCAGCTGGTGCCTCAGAACTGCCCTCAAGGTCCATGAACTGCTGTG
<i>Monodelphis domestica</i>	CTGCCTGG-----GCTTCTGGGCTTCCCATCAGAATTCTGATTGTTGCTGTC
<i>Macropus eugenii</i>	CTACCTGGATATTTACTGG--GCTTCTGGCTTCCCAACAGAATTCTAATTGTCTGTT
<i>Wallabia bicolor</i>	CTACCTGGATATTTACTGG--GTTTCTGGCTTCCCAACAGAATTCTAATTGTCTGTT
	* *

<i>Gallus gallus</i>	ATGGCTCTAAAAAGCATAGGCATGAGAGATCCCAAATG
<i>Monodelphis domestica</i>	ACATCCATGAGAAACAGAGCCAAGAGAAATCCAAACAG
<i>Macropus eugenii</i>	ACATCCATAAGAAACATAGTCAAGAGAAACTTCAAACAG
<i>Wallabia bicolor</i>	ACATCCATGAGAAACATAGTCAAGAGAAACTTCAAACAG
	* *

Pairwise SIM alignments to chicken sequence

<i>Gallus gallus</i>	GTCCAGGCTATTACCCTTGAGATTTTCCTGAATCACAAAATTCATCCTCGAATCCGAATG
<i>Monodelphis domestica</i>	GTTCAAGAAATAGTTCTTCATATATTCTTTAATACCAACATCCCTCCCCAAGACAGAATT
<i>Macropus eugenii</i>	GTTCAAGAAATAGCTCTTCATGTGTTCTCAATACTGATGTCCCTCCCCAAGATGAAATA
<i>Wallabia bicolor</i>	GTTCAAGAAATAGCTCGTCATGTGTTCTCANTACTGATGTCCCTCCCCAGGATGAAATA
	** *

<i>Gallus gallus</i>	TTAGCTGCAGTGTTTGTCTTGAAACTAAGCCAG-----GTCT-----TCCAAT
<i>Monodelphis domestica</i>	GTTCTTTGTCTGGTTCTATTGGAACTATACCTG-----AGCT-----AATAAT
<i>Macropus eugenii</i>	GTTCTTTCTCCAGCTTTATTGGAACTGTTGGAGGGAGGACAAGAA-----AACAAA
<i>Wallabia bicolor</i>	GTTCTTTCTCCAGCTTTATTGGAACTGTTGGAG-----GGAGGACAAAAAACAAA
	* *

[illegible]

Pairwise SIM alignments to chicken sequence

[illegible]

Pairwise SIM alignments to chicken sequence

Gallus gallus TGCATTATGTACAGTCTGCAGTGCTTAATAAATATGTTGTTTCATTAAATAAGTA
Monodelphis domestica T-CATTATGTACAGTTTG---TTTTTAATAAATGTGTTGCTCATTAAATACGCA
Macropus eugenii TGCATTATGTACAGTTTG---TTTCTAATAAATGTGTTGCTCATTAAATACCCA
Wallabia bicolor TGCATTATGTACAGTTTG---TTTCTAATAAATGTGTTGCTCATTAAATACGCA
 * ***** ** * *****

b. VIT2

Pairwise SIM alignments to chicken sequence

```
Gallus gallus          GTCCGCTCTCCACAAGTGGAGGAGTACAATGGGGTCTGGCCAGGGATCCCTTCACTCGA
Monodelphis domestica  CTTTCAGGCTCCATAACTAGAGAATGCACCAGTTTCTGGAGTAAAGATTCCTTCATTTAC
Macropus eugenii       ATTCAGTCTCCACAAGTAGAAGAATACACTGGTATCTGGCCTAAAGATTCATTCATCTAT
Wallabia bicolor       CTGTAGTCTCCAGTAGAAGAAGACTACAGTGGTAT---GCGTCAAGATTCATTCATCTAT
                        *      * * * * *      * * *      *      *      *      * * * * *
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```
Gallus gallus          TCTTCCAAAATCACCCAAGTGATCT-CATCGTGTTCACCCGGCTCTTC---AAATTTGA
Monodelphis domestica  TCACCTAAGCCCACTAAGGCAAT-T-CATCTGGCCTTATCCAAATAT-----AAGCTTGA
Macropus eugenii       TCACCTAAGCTCACTCAGACAAT-TGCATCTGGCTTTATGCAAATATTC---AAGTTTGA
Wallabia bicolor       TCATCTCAGATCATTAATCCAAC-AGCATCATGCGGTTTTCAAATAATCAAGAAGTTGGA
                        ** * * * * *      *      * * * * *      *      *      * * * * *
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```
Gallus gallus          ATACAGCAGTGGACGGATCGGAAACATTTATGCCCCAGAAGACTGCCCAGATCTGTGTGT
Monodelphis domestica  GAATAATAATGGGCACATTGGCAACTTCTATGCCCCAAAAGTCACCTCAACTATCATTTGT
Macropus eugenii       GTATAATAACGGACTAATCGGCAACATCTATGCCCCAAAGGACACCCAGCTATCTCTGT
Wallabia bicolor       CTTCAATAGTGTA---ATAGTCAACAACATTGCTGCAACAAACGCCCCACCAATTTTTTTT
                        * * *      * * *      * * *      * * *      * * *      * * *
```

```
Gallus gallus          TAACATAGTGAGAGGAATATTGAACATGTTCCAGATGACCATTAAAAAATCACAGAACG-
Monodelphis domestica  TAACATAATAAGTGAATACTAAATATGTTCCATTTTACCATCAAAAAGTCTCAAGATAG
Macropus eugenii       TAACATAGTAAGAGGGATACTAAATATGTTCCATATCACCATCAAGAAGTCTCAAAATAT
Wallabia bicolor       TGTCAATCGTAGGAAGGATGATAAATATGTTGCTTATCATCACCAAGAAGTAGTATAA--A
                        * * * * *      * * * * *      * * * * *      * * * * *
```

```
Gallus gallus          -TCTACGAATTACAAGAG
Monodelphis domestica  ATCTATTACTTGCAAGAG
Macropus eugenii       AT--ATTACTTACAAGAG
Wallabia bicolor       ATTTATTATTAACAACAG
                        * * * * * * * *
```

Pairwise SIM alignments to chicken sequence

```
Gallus gallus          GCTGGAATTGGAGGTATTTGTCATGCAAGGTATGTCATTACAGGAAGACAGGAAGAATAGC
Monodelphis domestica  GCCAGGATTGGTAGTGTATGTTATACCAATTATATCATCCATGAAGATAAGATAAATAAT
Macropus eugenii       NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
Wallabia bicolor       NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
```

```
Gallus gallus          CGAATCTATGTTACCAGAACTGTGGACTTGAATAATTGCCAGGAAAAGGTGCAAAAAAGC
Monodelphis domestica  AAGGTTTCTATCATGAAATCCAGAGATCT---CAACTGCCAGGACAAGGCAGTCAGAAAG
Macropus eugenii       NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
Wallabia bicolor       NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
```

```
Gallus gallus          ATTGGAATGGCTTACATCTATCCCTGCCC
Monodelphis domestica  ATAGGAATGGCTTATCTACATGTCTTTCC
Macropus eugenii       NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
Wallabia bicolor       NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
```

<i>Gallus gallus</i>	AAAGAAAGGCTCACCAAGGGACCACCGCTTTCTCCTACAAGCTGAAGCAGTCAGACAGC
<i>Monodelphis domestica</i>	AAAAGTGAGATTGTGAAAGGAACAGAGACATAGTCTACAAAATGAAGTATATAAA-AGG
<i>Macropus eugenii</i>	AAAGCTGGGATTGTTAAAGAAACAGAGACATACTCCTACAAAATGAAGTATACAGG-ACA
<i>Wallabia bicolor</i>	NNNATGAA-ATT

*

Gallus gallus -GGCACGCTGATCACAGATGTCTCGTCGCGGCAGGTGTATCAGATCTCCCCATTCAATGA
Monodelphis domestica -GGGGCTCTCATCACAGAAATTATGTTTACCAGGTATTAACAAGTCCCCCTATTCAATAA
Macropus eugenii TGGGGCTTTGATCACAGAAGTTACAGTTCACCAGATATACCAAGTCTCCCCATTCAATGA
Wallabia bicolor -GGTAAATTGATCAC -GAGCTTACAGTACACCATATATACTTTTGTCCGCATTAATGT
 ** * * * * *

Gallus gallus GCCCACTGGGGTGGCTGTCATGGAAGC---AAG
Monodelphis domestica AGAGAATGGGGTTGATGTGACAGATAC---TAT
Macropus eugenii AGAGAACGGGGTTGGAGTGACAGAAAC---TAA
Wallabia bicolor GCCGACTGGAGTTGGATGGACAGAAAAAGCAA
* * * * * * * *

<i>Gallus gallus</i>	ACAGCAGCTCACTTTGGTCGAGGTGAGAAG-TGAGCGGGGCAGTGCCCCGATGTCCCA
<i>Monodelphis domestica</i>	ACAAAACATCAGCTTGATGGAAGTGAAAAATAAATATTGAGCTCCCTAAAGTTCAAA
<i>Macropus eugenii</i>	GCAAAACCTCAGCTTGATCGAAGTGAAAAACGAGA-GTTTGAGCTCCCCAGAAGTTCAT
<i>Wallabia bicolor</i>	GCAAGACCTCAGCTTGATCGAAGT-AAAAAACGAGAGTTTGAGCTCCCCAGAAGTTCAT
	** * *** *** ** * * * * *

<i>Gallus gallus</i>	TGCAGAACTATGGCAGCCTTCGCTACCGCTTCCAGCCGTA	ACTGCCACAGATGCCACTTC
<i>Monodelphis domestica</i>	TGCAGAACTCAGATAAGTCTTCAGTACCTTTTCCAACCA	CCAGACATCAGATGCCTTTTC
<i>Macropus eugenii</i>	TGCAGAACTCAGGGAAACCTTCAGTACCGTTTTCTTA	ACCACCAGACACCAGATGCCTTTCC
<i>Wallabia bicolor</i>	TGCAGAACTCAGGGAAACCTTCAGTACCATTTCTTA	ACCACCAGACACCAGATGCCTTTCC
	*****	* * * * *

<i>Gallus gallus</i>	AGCTGATCAAGACAAAA-----AACCTGAGCAA
<i>Monodelphis domestica</i>	AGTTGGTAAAAATAAAT-----TCATTTCATCAG
<i>Macropus eugenii</i>	AGCTAGTGAAATGAATAACCCCAAAAGGCAGGTATGAAACAGGCTTTTCACTTAATCAG
<i>Wallabia bicolor</i>	AGCTAGTGAAATGAATGACCCCAAAAGGCAGGTATGAAATGGGCTTTTCACTTAATCAG
	** * * * *

Gallus gallus -----CGG
Monodelphis domestica -----CAG
Macropus eugenii GTTCTTTGAGGGCTAG
Wallabia bicolor GTTCTTTGAGGGCTAG

*

Gallus gallus ATAATAGAAACGCTGCAGCACATAGTCTGAATAACCAACAAGATTTCCATGACGATGTT
Monodelphis domestica -----GAGGTACTCCAGCACCTCCTTCAGAACCAACAAGAACATTCCATGAAGATGCT
Macropus eugenii -----GAGGTCCTCCAGCACCTCATCCAGAATAACCAAGAAACATTCCATGAAGATGCT
Wallabia bicolor -----GAGGTCCTCCAGCACCTCATCCAGAATAACCGAGAAACATTCCATGAAGATGCT
*** ** *

<i>Gallus gallus</i>	TCATACAGATTCTTAGAGGTGGTCCAGCTTTGCCGGATAGCAAATGCTGACAATCTTGAG
<i>Monodelphis domestica</i>	CCAGCCAGATTTCTCAAACCTCATCCAGCTCATTCAAATGATGGATGCTAGAAGTCTGGTC
<i>Macropus eugenii</i>	CCCACCAAACCTTCTAGAGCTTATCCAGCTGATTCAGTCAATGGATGTCGGAAGCCTGGCC
<i>Wallabia bicolor</i>	CCCACCAAACCTTCTAGAGCTTATCCAGCTGATTCGGTCAATGGATGTCGGAAGCCTGGCC
	* * * * * * * * * * * * * * * * * *

<i>Gallus gallus</i>	TCTATCTGGAGACAAGTTTCAGATAAACCTCGTTACAG
<i>Monodelphis domestica</i>	AATGTTTGAAAGCAGTGGAAGACAAGCCTCAATATTG
<i>Macropus eugenii</i>	AGCGTTTGGAAGCAGTGGAAGACAGGACTCAGCACAG
<i>Wallabia bicolor</i>	AGCGTTTGGAAGCAGTGGAAGACAGGACTCAGCACAG
	* * * * * * * * * * * *

Pairwise SIM alignments to chicken sequence

<i>Gallus gallus</i>	TGGCTCCTGAGCGCAGTTTCTGCGAGTGGCACCACAGAAACACTAAAATTCCCTTAAGAAC
<i>Monodelphis domestica</i>	TGATTGCTGAGTGTCTCTCTATGGCTGGAACCAAAGATATCTTGAAGTTCACCAAGCAA
<i>Macropus eugenii</i>	TGGTTGCTGACTGCCATCACCATGGCAGGAACCAAAGACACCCTGAAACTCATCAAGCAA
<i>Wallabia bicolor</i>	NN

<i>Gallus gallus</i>	AGAATTGCAATGATGACCTCAACTACATTGACACCCTTCTAACTGTTTCTTTGACTCTT
<i>Monodelphis domestica</i>	AAAATTGGGAGTGAATTCTTCTCCTTCCCTAAAGAATTTGCTAG-TGGTTGTTTTTTTCAT
<i>Macropus eugenii</i>	GAAATTGAGAGTGATGCCTTCTCCTTCTTGAAAATTTGTGG-TGGTTGTTTGTCTCT
<i>Wallabia bicolor</i>	NN

<i>Gallus gallus</i>	CATTTATTGCAA--GCTGATGAACACACACTTCCAATAGCAGCA
<i>Monodelphis domestica</i>	TAAATCTTACTATAGCTGATGCCAATGTCCTTCCCATAGCTGCT
<i>Macropus eugenii</i>	CCAA-CTCACTACAGCCGACACCAGTGTCTTCCCATAGCTGCA
<i>Wallabia bicolor</i>	NN

Pairwise SIM alignments to chicken sequence

<i>Gallus gallus</i>	GATTTAATGACCAGCTCTCGAATTCAGAAAAATCCTGTGCTTCAGCAAGTGGCCTGCTTG
<i>Monodelphis domestica</i>	AAAATTGTCGCCAGTCCCTCAAATACAGAAATATTTCTTGCTTCAAAAAGTGGCTCTCCTA
<i>Macropus eugenii</i>	GAAATTGTCACCAGTCCCTCAAATACAGAAATATCCCTTGCTTCAAAAGGTTGCTCTCCTG
<i>Wallabia bicolor</i>	GAAATTGTCACCAGTCCCTCAAATATAGAAATATCCCTTGCTTCAAAAGGTTGCTCTCCTG
	* * * * * * * * * * * * * * * * * * * * * * * *

<i>Gallus gallus</i>	GGATATAGCTCTGTAGTCAACAGATACTGCTCTCAGACCTCAGCATGTCTTAAGGAAGCT
<i>Monodelphis domestica</i>	GCTTATGGCTCTACGGTTTATAGGATGTATCTGCCACTTCATCATCTCTTGCTGAAACC
<i>Macropus eugenii</i>	GCCTACGGCTCTATGGTTTACAGGTCATATCTTTTCACTTCAGCATCTCCTGCTGAAGCC
<i>Wallabia bicolor</i>	GCCTACGGCTCTATGGTTTACAGGTCATATCTTTTCACTTCAGCATCTGCTGCTGAAGCC
	* * * * * * * * * * * * * * * * * * * *

<i>Gallus gallus</i>	CTTCAG
<i>Monodelphis domestica</i>	CGTTAG
<i>Macropus eugenii</i>	CTTCAG
<i>Wallabia bicolor</i>	CTTCAG
	* * * *

Pairwise SIM alignments to chicken sequence

<i>Gallus gallus</i>	TCCATGACCTGGCAGATGAAGCAATCAGCAGGGGCCGTGAAGACAAAATGAAATTAGCTC
<i>Monodelphis domestica</i>	TCCATAATTACACAAATGAAGCAATTAATAATGGCCAGCAAGAAGCAATGGTCATAGCAA
<i>Macropus eugenii</i>	NN
<i>Wallabia bicolor</i>	NN

<i>Gallus gallus</i>	TAAAGTGCATTGGTAACATGGGAGAACCAGCCAGCTTAAAGCGCATCCTGAAGTTCCTTC
<i>Monodelphis domestica</i>	TGAAGGTCCTTGGCAACTCGGGCTAAGTGGCCAGCATCAAATGCATCCAGAAGCACCTGC
<i>Macropus eugenii</i>	NNCTGC
<i>Wallabia bicolor</i>	NN

<i>Gallus gallus</i>	CAATATCTTCATCCAGTGCTGCTGATATCCCAGTCCACATTAGATAGATGCCATAACGG
<i>Monodelphis domestica</i>	CAAGATTCTCCCCATCTGCTTCTGCTCTTCCAGGCAGGGTTCATGTGGA-----AG
<i>Macropus eugenii</i>	CA-GATTCTCACTATCTGCTTCTGATCTTCCAGTCAGGGTTCAGTGA-----AG
<i>Wallabia bicolor</i>	NN-----NN

<i>Gallus gallus</i>	CCTTGA-----AAAAGATAGCTTGAAGGACCCCAAAACA
<i>Monodelphis domestica</i>	CTGTGA-----GAAAGAGAGTCAGGAAAGAGCCTTCAAAA
<i>Macropus eugenii</i>	CAGTGATGGCCCTGAGGAAGATAGTCAGGGAAGATGCCTCAAAG
<i>Wallabia bicolor</i>	NN

Pairwise SIM alignments to chicken sequence

<i>Gallus gallus</i>	GTGCAGGGCTATCTCATCCAGATCCTTGCAGACCAATCACTTCCCCCTGAGGTGCGAATG
<i>Monodelphis domestica</i>	TCAATAAACTCCAGTGGCTCCTAATTGCCCCCTGGGATAAAAGGACAGCATCTCTGTTTGA
<i>Macropus eugenii</i>	-----
<i>Wallabia bicolor</i>	-----

<i>Gallus gallus</i>	ATGGCTTGTGCTGTTATCTTTGAGACAAGGCCTGCCCTTGCTTTGATAACGACTATAGCT
<i>Monodelphis domestica</i>	CATTTTTCTGCTTTTCTGTTTGAAGTACAGCCTCCTCCTTCTGTGATGACCACAGCAGCC
<i>Macropus eugenii</i>	-----TGCTTTGCTGTTTGAAGCTCAGCCTTCTCCTTCTGTGATGACCATGGTGGCC
<i>Wallabia bicolor</i>	-----TCTGCTTTGCTGTTTGAAGCTCAGCCTTCTCCTTCTGTGATGACCATGGTGGCC
	***** * * ***** ***** * * * * * * * * * * * *

<i>Gallus gallus</i>	AACGTGGCAATGAAGGAGAGCAATATGCAAGTGGCCAGTTTTGTATATTCCCACATGAAG
<i>Monodelphis domestica</i>	GATATCATGCTAAAGGAGAAGAGCTTGCAAGTAGCCAACTTCATTTACTCCAACGTGAAG
<i>Macropus eugenii</i>	AATATCATGCTGAAGGAGAAAGACTTGCAAGTAGCCAGCTTCATTTACTCCTACATGAAG
<i>Wallabia bicolor</i>	AATATCATGCTGAAGGAGAAAGACTTGCAAGTAGCCAGCTTCATTTACTCCTACATGAAG
	* *

<i>Gallus gallus</i>	TCTTTGTCAAAGAGCAGATTGCCATTTATGTACAACAT
<i>Monodelphis domestica</i>	ACCATCTCCACAAATCACTTTCCAGACGGGGCTAATGT
<i>Macropus eugenii</i>	ACCATCTCCACAAATCACTTTCCAGATTGGGGTAACAT
<i>Wallabia bicolor</i>	ACCATCTCCACAAATCACTTTCCAGATTGGGGCTAACAC
	* *

Pairwise SIM alignments to chicken sequence

<i>Gallus gallus</i>	ATCTTCAGCTTGTAACATTGCCCTTAAGCTCCTGTCCCCAAACTGGACAGTATGAGCTA
<i>Monodelphis domestica</i>	GTCTGCAGGAAGCAACATTGCCATCAAATTCTTGAGTCCCAAACATGGAACACCTGACTTA
<i>Macropus eugenii</i>	NN
<i>Wallabia bicolor</i>	NN

<i>Gallus gallus</i>	TCGGTA-----CAGCAAGGTCATTGAGCA-GACACTTACTTTG
<i>Monodelphis domestica</i>	CCACTATTATTTCTCTTGCTACTTCAGCAAGTAAAATGGATCATGTGGGGTGTTC
<i>Macropus eugenii</i>	NN
<i>Wallabia bicolor</i>	NN

Pairwise SIM alignments to chicken sequence

<i>Gallus gallus</i>	ATAACTATAGAGTTGGTGCTACTGGAGAAATCTTGTGTGAACAGCCCAAGAACTATGT
<i>Monodelphis domestica</i>	GAGAGTAAAAGCCTGGCACGTTTCATGAGATTCTTCATCTTATACAGTGTGAGACTTTGT
<i>Macropus eugenii</i>	NN
<i>Wallabia bicolor</i>	NN

<i>Gallus gallus</i>	TCCCATCAGCAATAATTTCCAAATTGATGGCAAATTCTGCAGGTTCACTGGCTGATCTGG
<i>Monodelphis domestica</i>	TCCCAACAGCCAAAACCTTCGAGCCTGGGGGCACACTTTGCTGGGGCATCCATCAGTCTTG
<i>Macropus eugenii</i>	NN
<i>Wallabia bicolor</i>	NN

<i>Gallus gallus</i>	TAGAG
<i>Monodelphis domestica</i>	TGGAG
<i>Macropus eugenii</i>	NNNNN
<i>Wallabia bicolor</i>	NNNNN

Pairwise SIM alignments to chicken sequence

<i>Gallus gallus</i>	GTTGGCATCCGAGTGAAGGCCCTCGCAGATGTCATAATGAAAAGAAACATCCCATTGCT
<i>Monodelphis domestica</i>	GCTGCTATCTAGGTGAAGGTTTGACAGAACTATGAGGAGAAAGAATACATAATTTGTG
<i>Macropus eugenii</i>	NN
<i>Wallabia bicolor</i>	NN

<i>Gallus gallus</i>	GAATATCCCACATACAAGCAGATAAAGGAGCTTGAAAAGCT
<i>Monodelphis domestica</i>	GAATCTCCCTCACATAAGAAGATAAAGGAACCTGTAAAGGCA
<i>Macropus eugenii</i>	NN
<i>Wallabia bicolor</i>	NN

Pairwise SIM alignments to chicken sequence

<i>Gallus gallus</i>	CTGCAGGGATGGAAGAGCTGCC
<i>Monodelphis domestica</i>	CTGCAGGGACAGAGGGAGCTACC
<i>Macropus eugenii</i>	NNNNNNNNNNNNNNNNNNNNNNNN
<i>Wallabia bicolor</i>	NNNNNNNNNNNNNNNNNNNNNNNN

Pairwise SIM alignments to chicken sequence

```
Gallus gallus          TACAGTTGCAACGATGGGTGTCAACACAGAATACTTTCAACATGCTGTTGAAATT-----
Monodelphis domestica TACACTGGCAGCAATGGCCATCAACACTGCTGTCTTTTCAG-----ATTGACATT-----
Macropus eugenii      CTCTGTGGCAGTAATGACCATCAACACCCCTGTCTTCCAG-----TCTGGCATTGAGCT
Wallabia bicolor      CTCTGTGGCAGCAATGACCATCAACACCCCTGTCTTCCAG-----TCTGGCATYgagct
                        *  *  ***      ***      *  *  *  *  *      *  *  *  *  *
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Gallus gallus          -----CAAGGCGAGGTCCAGACAAGAATGCCAATGAAGTTTGATGCCAAGAT
Monodelphis domestica -----CAAG-----CAGATCAC----TCAATGGAATTGGTCACCAAGTT
Macropus eugenii      CCAGGCAAAACTCCAGG-----CAACTTAC----CCAATGAAATTGGACATGAAATT
Wallabia bicolor      ccaggcgaaactcCAGG-----CAACTTAC----CCAATGAAATTGGACATGAAATT
                        *  *  *      *  *  *      *  *  *  *  *  *  *  *
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```
Gallus gallus          AGATGTGAAATTGAAAAACCTTAAGATTGAAACGAACCCATGCCGTGAGGAAACTGAGAT
Monodelphis domestica AGACCGAGAAGAGAAAAAGCTTTAAGTATGAAATCTTCCATTAGACCAAAAGACTAAGCT
Macropus eugenii      GGACCTAAAAGAGAAACACTTTAAGTATGAAACCTTTCCATGGCCCCCAGAGTCGGAGCT
Wallabia bicolor      GGACCTAAAAGAGAAACACTTTAAGTATGAAACCTTTCCATGGCCCCCAGAGTCGGAGCT
                        **      **      *****      *****      *****      *  *  *  *
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Gallus gallus          AGTGGT
Monodelphis domestica CCTGAT
Macropus eugenii      CCTGAT
Wallabia bicolor      CCTGAT
                        *  *  *
```

Pairwise SIM alignments to chicken sequence

```
Gallus gallus          ACATAAGGCTTTTGCTGTATCAAGGAACATAGGAGAACTAGGTGTTGAAAAGAGGACCTC
Monodelphis domestica TGCCAAGGCATTTTGCTGTATCTAGAAAAGAGTCAGGAGCCAGAAACCGAAGAGAAGATTCC
Macropus eugenii      TGCCAAGGCATTTTGCTATATCAAGAAAGAGTGGGGAGCCAGAAATGGAAAAGAAGATTCC
Wallabia bicolor      TGCCAAGGCATTTTGCTGTACCAAGAAAGAGTGGGGAGCCAGAAATGGAAAAGAAGATTCC
                        ***** ***** *  *  *  *  *  *      *  *  *  *  *  *  *
```

```
Gallus gallus          AATTCTGCCGGAAGATGCTCCATTAGATGTTACAGAAGAACCTTTCCAACATCAGAGAG
Monodelphis domestica TTTAGTTCTTGAGAAAACCAGATCTGAGATCTCCAAGGAGCAATTTGGTTCAACAGATAG
Macropus eugenii      TCTAGTTCCTGAGGAAGCAGGATCTGAGATCTCCAAGGGGCAAGTTGGTTCTGCAGAGAT
Wallabia bicolor      TCTAGTTCCTGAGGAAGCAGGATCTGAGATCTCCAAGGGGCAAGTTGGTTCCGCAGAGAT
                        *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *
```

```
Gallus gallus          AGCTTCCAGGG
Monodelphis domestica GACTTTGAAGG
Macropus eugenii      GATTTTTAAGG
Wallabia bicolor      GATTTTTAAGG
                        *  *  *  *
```

Pairwise SIM alignments to chicken sequence

```
Gallus gallus          CCTAAGTTTCTGGGTGACATCAAACCCAGTGTTAGCTGCTTTTCTCCATGGCATTAGT
Monodelphis domestica ATGAAGTTCTTGAGGACAACATCCATCCATGCTAACTGCAATATTTCAAGGTAGAATGC
Macropus eugenii      ATGATGTTCTCGGAAAGCAATCATCCACCCATAATGACTGGAATATTTAAGGTAGAATAC
Wallabia bicolor      NNNNNGTTCTCGGAGAGCAATCATCCACCCATAATGACTGGAATATTTAAGGTAGAATAC
                        ***      **      **      *  *  *  *  *  *  *  *  *  *
```


Pairwise SIM alignments to chicken sequence

[illegible][illegible][illegible]

<i>Gallus gallus</i>	ATCAAGATTGGCAGTCA
<i>Monodelphis domestica</i>	GTCAAAGTGAAGTATCA
<i>Macropus eugenii</i>	GTCAAACGGGCCAATCA
<i>Wallabia bicolor</i>	NNNNNNNNNNNNNNNNNN

Pairwise SIM alignments to chicken sequence

[illegible]

<i>Gallus gallus</i>	CCC
<i>Monodelphis domestica</i>	CCC
<i>Macropus eugenii</i>	TCC
<i>Wallabia bicolor</i>	NNN

Pairwise SIM alignments to chicken sequence

[illegible][illegible]

Pairwise SIM alignments to chicken sequence

<i>Gallus gallus</i>	ATTCAAGTTCCTTTATGGATGGCAGGGAAAACATGTGGAATCTGTGGAAAATATGATGCA
<i>Monodelphis domestica</i>	GTTCACATTTCCTTTCTGGATGATTGGAAAAACACATCATCTGCATAGACAAGCAAATGCA
<i>Macropus eugenii</i>	GTTTCATATTCTTTCTGGATGATTGGAAAAACACTTGGCCTCTGTGGACAAGCAAATGCA
<i>Wallabia bicolor</i>	NN

<i>Gallus gallus</i>	GAATGCGAACAGGAGTATCGGATGCCCAATGGATATCTAGCTAAAAATGCCGTGAGCTTT
<i>Monodelphis domestica</i>	GAAACCACCCAGGAGTTTCAGATGCCCGGTGGCTACATGGCTAAAGATGCTATGAGTGCT
<i>Macropus eugenii</i>	GAAACCATTCAAGAATTCCAGATGCCCAGTGGCTACATAGCTAAAGATGCTGTGAGCTTT
<i>Wallabia bicolor</i>	NN

<i>Gallus gallus</i>	GGTCATTCTTGGATCTTGAAGAAGCGCCCTGTAGAGGAG
<i>Monodelphis domestica</i>	GCTCAATCTTGGGTCTGACAGATGGCTCTTGCTCCAGGG
<i>Macropus eugenii</i>	GCTTGATCTTGGGTCTGACAGATGACTCCTGCTCCAGAG
<i>Wallabia bicolor</i>	NN

Pairwise SIM alignments to chicken sequence

<i>Gallus gallus</i>	CTTGTAAGTGCATCGTTCATTCGTGAAGCTTGAGAAGACGGTTCAGCTGGCGGGTGTG
<i>Monodelphis domestica</i>	CATGTTCTTTTCAACACCAGTTCATGAACTTGAGGAAATAATTTTCCTTCAAGGAGAAC
<i>Macropus eugenii</i>	CTTGTTCTTTTCAACACCAGTTCATGAGACTTGAGAAACAATTTACCTTCAAGGAGAAA
<i>Wallabia bicolor</i>	NN

<i>Gallus gallus</i>	ATTCCAAGTGCTACTCTACAGAGCCTGTGCTGCGCTGTGCAAAGG---GATGCTCTGCT
<i>Monodelphis domestica</i>	ATTCTTCTTGCTTTTTCAGCACAGCCAGTGTGGGGTGTCTGAAGGACTAGAAAATGGGGT
<i>Macropus eugenii</i>	ATTCTTCATGCTCATCCGTGCAGCCAGTGTGAGGTGTTGGAAGGGCTGCAGAGTGGGCC
<i>Wallabia bicolor</i>	NN

<i>Gallus gallus</i>	ACCAAGACAACTCCAGT-ACTGTTGGCTTCCACTGCCTCCAGCTG
<i>Monodelphis domestica</i>	AAACCATCAGCACCCCTT-A----TTGGCTTTTATTAAGTCCCAATTG
<i>Macropus eugenii</i>	AAACCATCAGCACCCCTTGG---TTGACTTTCATTGCCTTCCAGCTG
<i>Wallabia bicolor</i>	NN

Pairwise SIM alignments to chicken sequence

<i>Gallus gallus</i>	ATTCAGCTAACAGCCTGACTGACAAACAGATGAAGTACGACCAGAAGTCAGAAGACATGC
<i>Monodelphis domestica</i>	ATTCTGATGCCACTCTGCCACTGCCCTGACAAGGTTAGACCTGAAGTCCCAAGATATGG
<i>Macropus eugenii</i>	ATTCTGATGCCATTTTGCCATGGCACCATCAAGATTGGAGCTAAAGTCTGAGGATGTGG
<i>Wallabia bicolor</i>	NN

<i>Gallus gallus</i>	AGGA
<i>Monodelphis domestica</i>	AGGA
<i>Macropus eugenii</i>	AGGA
<i>Wallabia bicolor</i>	NNNN

c. *VIT3*

Pairwise SIM alignments to chicken sequence

[illegible][illegible]

Pairwise SIM alignments to chicken sequence

Gallus gallus CCACTGTCATGACCTTGCTGCTGAAGCTTCAAGCAGA---AGCCATGTTGAAGACATGGC
Monodelphis domestica TTATTTCTTGACTTTTGTTACCATGGCTTTTAGCAGATAGAGGTCTAAGGAAGAAATGAC
Macropus eugenii CTGT-----CTTTCTTACTATGGCTTTTAGCAGATATAGGTCat-----atGAC
Wallabia bicolor CTGT-----CTTTCTTACTATGGCTTTTAGCAGATATAGGTCat-----atGAC

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Gallus gallus CTTGGCCCTGAAAGCTATAGGCAATGCAGGAGAGCCAGCCAGCATCAAACGCATCCTGAA
Monodelphis domestica TACAGCCCTGAAGGATATTGGGAATGTGGGCCAGTTAGAAAGTCATAAACACATTTCATAA
Macropus eugenii CACAACCCCTGAAGGTTATtGCTAATGTAGKCCAgYYSGAAAGCYTTAAACAATCCAGAA
Wallabia bicolor CACAACCCCTGAAGGTTATTGCTAACGTAGGCCAGTCAGAAAGCTTTAAACCAATTTCAGAA
 ***** *

Gallus gallus GTTTTTGCCAACATTTTCACCTTGCTGCCGCGGCATTACCAAGCAGAATTCATACT-GATG
Monodelphis domestica GTTCCTGACAGTATTTTAAATTGCTGCTTCTGATCTTCCAGTTTTAATTACAGGCAAGAAA
Macropus eugenii GTTCCTGCCAATATTTTAAATTGCTGCTTCTGATCTTCCAGTTATAATTACAGGCA-GAAA
Wallabia bicolor GTTCCTGCCAATATTTTAAATTGCTGCTTCTGATCTTCCAGTTATAATTACAGGCA-GAAA
 *** ** ** *

<i>Gallus gallus</i>	CCGTGCTGTCCTTGAG---GAAAAATAGCCAGAAAAGACCTGCAAAA
<i>Monodelphis domestica</i>	CTATTATGGCTCCAAGTTGGAAAAAGAAGTTGCAATATCTCTCAAAA
<i>Macropus eugenii</i>	CTATTATACCTCTAAGATGGGAAACAGG-----CCCTCAAAA
<i>Wallabia bicolor</i>	CTATTATACCTCTAAGTTGGGAAACAGG-----CCCTCAAAA
	* * * * *
	* * * * *
	* * * * *

Pairwise SIM alignments to chicken sequence

[illegible][illegible]

<i>Gallus gallus</i>	GTTCTACACATATCTTCCAGGAGCTGCGTATATGCTTGCTACTCCCAGAAGCAGCAGCG
<i>Monodelphis domestica</i>	GTTTTATGGATATGCTTCAAGAGTTGCATATATGTGAAGATTCTCTGAAAAGAAATGGAA
<i>Macropus eugenii</i>	GTTTTATGGATATGCTCCAAGAGTTGCATATATGTGAAGCTTCTCTGAAAAGAAATGGAA
<i>Wallabia bicolor</i>	GTTTTATGGATATGCTCCAAGAGTTGCATATATGTGAAGCTTCTCTGAAAAGAAATGGAA
	* * * * *

<i>Gallus gallus</i>	TGGTCCTTCTCACCAGG
<i>Monodelphis domestica</i>	AAATCCTTCTCAACAGG
<i>Macropus eugenii</i>	TAATCTTTCTCAACAGG
<i>Wallabia bicolor</i>	TAATCTTTCTCAACAGG

[illegible][illegible]

<i>Gallus gallus</i>	GTTCTGGTAATGATGAAAAGACTTGGAGAATCTGCTGATCTCACGCAATAAGTGTCAG
<i>Monodelphis domestica</i>	ATTCTTG-GATGATAAAGAAAGCTG-AAAGCCTACCAACCAAAAAATCTTCAATCTCAA
<i>Macropus eugenii</i>	GTTCTGGTGATGATAAAGAAGGCTG-AAGGTCTGCCAACCAAAAAATTATCAATGTCAG
<i>Wallabia bicolor</i>	NNNTCAATGTCAG

* * * * *

<i>Gallus gallus</i>	ACTTGCCAGCCA
<i>Monodelphis domestica</i>	ACTTGGCTCTCA
<i>Macropus eugenii</i>	ACTTAGTTGTCA
<i>Wallabia bicolor</i>	ACTTAGTTGTCA
	**** **

<i>Gallus gallus</i>	TGAGGTTGACATGTATGTTTCCAATGGACTAATCC---AGCTGAAGATTAAATGGTGTTCA
<i>Monodelphis domestica</i>	TGACATTGACATGTATACT---AAAGGAAAATGCCCTAAACTGAAGATTAAATGG-GTTAG
<i>Macropus eugenii</i>	TGACATTGTCATGTATCCT---AAAGGAGAATGCCTTAGAGTGAAGATTAAATGA-GTTAG
<i>Wallabia bicolor</i>	TGACATTGTCATGTATCCT---AAAGGAGAATGCCTTAGAGTGAAGATTAAATGA-GTTAG
	*** ** * ***** *
	** *** ** *
	***** ** *

<i>Gallus gallus</i>	AACCCCAAC----AGACGTTCCATACACATCTAAGTCTG
<i>Monodelphis domestica</i>	AAACTTAGCTGTAAAACTCTCATGTCAGTCTACTTTAG
<i>Macropus eugenii</i>	AAACTCAGCTGGA AAAACT-----ATCAGTGTGGTTTG
<i>Wallabia bicolor</i>	AAACTCAGCTGGA AAAACTCCTAT--CAGTGTGGTTTG
	* * * * *

[illegible][illegible]

Gallus gallus	GTGAGTTTTGCTCAGTCCTGGGCATCTCAGAAGACACGTGT
Monodelphis domestica	TTAAGCATTGCTTGCACCTTAGATCTTGGCAGATGATACCTGT
Macropus eugenii	NN
Wallabia bicolor	NN

Gallus gallus CTTGCAAGCTGCAGAGGAAATTTGTCAA AATTGAGAAGCCGGTTGCATTT---AACAAA
Monodelphis domestica TATGTGGACTGTTCTGAAAAGTCATAAAGATTGAGAAAATGAT-----GAAAAGA
Macropus eugenii AATGTCGACt-tTCTGAAAACTCATAAAAATTGAAAAAATTATTATTGGTTATGAAAAGA
Wallabia bicolor AATGTCGACt-tTCTGAAAACTCATAAAAATTGAGAAAATTATTATTGGTTATGAAAAGA
 ** ** * * * * * * * *

<i>Gallus gallus</i>	AGGCCTCAAATGCTTTTCCATTGAGCCAGTTTAC---GCTGTGCAGAAAGGCTGTTC
<i>Monodelphis domestica</i>	AAGCTGTGACGTGCTTGTCAATTCAGCTGGTTTGAGCTCAGCAGCGAGGTGGTTGTCCA
<i>Macropus eugenii</i>	AAGCTGCAACTTGCTTGTTGAYTCAGCTGATTTTGGCACAGTGGTGGGGGGAGTTGGCTA
<i>Wallabia bicolor</i>	AAGCTGCAACTTGCTTGTTGATTCAAGCTGATTTTGGCACAGTGGTGGGGGGAGTTGGCTA
	* * * * *

<i>Gallus gallus</i>	GCAACCAGGACTGTTCCTGTCTCTGTGGGTTTCCACTGTGTCCCATCTG
<i>Monodelphis domestica</i>	TGAA----AACTGCCCTGGTCTCTGTGGGCTTTCATTGTCTAGTAGCTT
<i>Macropus eugenii</i>	TGAA----AACTGCTGTGGGTCTCTGTGGGCTTCTGCTGTTTAGCAGCTG
<i>Wallabia bicolor</i>	TGAA----AACTGCCTGGGTCTCTGTGGGCTTCTTCTGTTTAGCAGCTG
	** *** ***** ** ** * **