

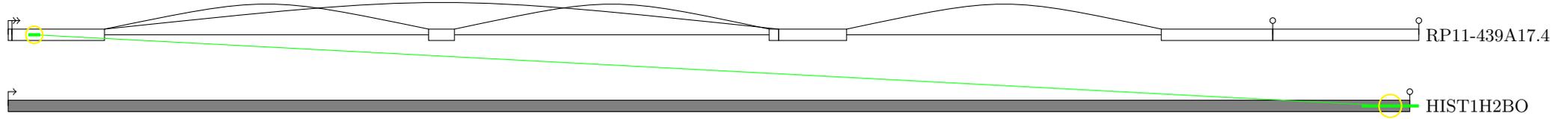
H. Sap	ta	cagctg	ctcttgatgaaaacggca-	GTGGCTCTGAAAAGATCCTTT	-----	agatcgaccacttaaaaata...	76...	gatggcgcacag	gttcgtgt
R. Mac	ta	cagctg	ctcttgatgaaaacggca-	GTGGCTCTGAAAAGAGCCTTT	-----	agatcgaccacttaaaaata...	76...	gatggcgcacag	gttcgtgt
P. Tro	ta	cagctg	ctcttgatgaaaacggca-	GTGGCTCTGAAAAGAaCCTTT	-----	aggtcgaccacttaaaaata...	76...	gatggcgcacag	gttcgtgt
P. Abe	ta	cagctg	ctcttgatgaaaacggca-	GTGGCTCTGAAAAGAGCCTTT	-----	agatcgaccacttaaaaata...	76...	gatggcgcacag	gttcgtgt
C. Jac	ta	cagctg	ctcttgatgaaaacggaa-	GTGGCTCTAAAAaGAGCCTTT	-----	agatccaccacttaaacacg...	75...	gatggcgcacag	gttcgtgt
M. Mus	ca	cagcta	ctttcatcgacaacgta-	GGTGGCTCTGAAAAGAGCCTTTG	----	tgggggatggaagggaaca-	78...	gatggcgcacag	gttggtgt
R. Nor	ca	cagcta	ctcttattgataacgta-	GGTGGCTCTGAAAAGAGCCTTTGTGGG	atgaaccagagatagcttag-	-----	68...	gatggcgcacag	gttggtgt
O. Cun	ta	cagctg	ctctcagcgacaacgtg-	GGTGGCTCTGAAAAGAGCCTTT	-----	aggttgactgctatagacac...	77...	gatggcgcacag	gttcgtgt
C. Fam	ta	cagctg	ctcctcgtgaaatca-	TGGGTGGCTCTGAAAAGAGCCTTT	-----	aggtggccttctgataaaaac...	78...	gatggcgcacag	gttggtgt
F. Cat	ca	cagcta	ctcctcgtgaaaaca-	TGGGTGGCTCTGAAAAGAGCC	-----	gttagtggtgccacttaaaa-	81...	gatagcgcacag	gttcgtgt
B. Tau	ca	cagctt	ctttcaagtgtagtc	GTGGGTGGCTCTGAAAAGAGCCTTTGG	-----	atttgatggaacctcgagca-	85...	gatggcgcacag	gttcgtgt
E. Cab	ca	cagctg	cttttcatgcaaca-	TGGGTGGCTCTAAAAaGAGCCTTT	-----	agatcgctgcttaataaac...	79...	gatggcgcacag	gttggtgt
S. Sus	ta	caactg	ctccttttgaaaagtgta-	GTGGCTCTGAAAAGAGCCTTT	-----	aagatagctcactgataaaaa...	80...	gatggcgcacag	gttcgtgt
O. Avi	ta	cagctg	cttttaagaaaac-	GTGGGTGGCTCTGAAAAGAGCCTTT	-----	agatcgctgtttttaaag...	78...	gatggcgcacag	gttcgtgt
L. Afr	ca	cagccg	ttttcgaatgctgt	TGTGGGTGGCTCTGAAAAGAGCCTTTGG	-----	atgagatggaaccggagcc-	86...	gatggcgcacag	gttcgtgt
	*	** *	*	***** **				** * **	** *

id=402330 gene=ENSG00000227193 name=RP11-439A17.4 segment=chr1\_120905007\_120905153\_-1 type=EN

H. Sap	g	gcgctgtt	ctgtttggagag--...	396...	-----	ttcctcggcgctcctgaacc	AAAGGcTCTTTTCAGAGCCAC	cca	cacgatca
R. Mac	-	gcgctgtt	tt-tttggagagac...	394...	-----	tttcccggcgctcctgaacc	AAAGGCTCTTTTCAGAGCCAC	cca	cacgatcg
P. Tro	g	gcgctgtt	ctgtttggagag--...	396...	-----	ttcccggcgctcctgaacc	AAAGGcTCTTTTCAGAGCCAC	cca	cacgatcg
P. Abe	g	gcgctgtt	ctgtttggagag--...	396...	-----	cgccccggcgccccgaacc	AAAGGCTCTTTTCAGAGCCAC	cca	cacgatcg
C. Jac	g	gcgctgtt	ctgtttggagag--...	396...	-----	cgccccggcgccccgaacc	AAAGGCTCTTTTCAGAGCCAC	cca	caagatcc
M. Mus	cc	gcgctgtt	ccgtagtacaac--...	393...	-----	cgcgaggggtgcctcaatt	CAAAGGCTCTTTTCAGAGCCAC	cca	tacagtgc
R. Nor	g	gcgctgtt	ttctccagtgca--...	388...	tgaggcggcgagggtgcc-	CTCAATtc	AAAGGCTCTTTTCAGAGCCAC	cca	tacagtgc
O. Cun	g	actgagt	ctgttttagtct--...	413...	-----	gcgcccgcgccctcacccc	AAAGGCTCTTTTCAGAGCCAC	aa	ctctttca
C. Fam	t	gctctttt	ttgtttggagag--...	395...	-----	caccggccaccgggaacac	AAAGGCTCTTTTCAGAGCCAC	cca	cacgatcg
F. Cat	c	gttctttt	ttgtttggagag--...	398...	-----	cgggcgccctggaacc	aaGGCTCTTTTCAGAGCCAC	cca	cataatcg
B. Tau	g	gctttttt	ttctaccgaag--...	395...	-----	gcacctcggtgcccggaac	CCAAAGGCTCTTTTCAGAGCCAC	TCA	Caagatca
E. Cab	g	gctttttt	t--tagttagagag...	395...	-----	cgccgcgcccgggaacc	AAAGGCTCTTTTCAGAGCCAC	cca	cacgatcg
S. Sus	g	tgtgtgtgt	gtgtgtgtgtgt--...	410...	-----	gcccaggcgcccgggaacc	AAAGGCTCTTTTCAGAGCCAC	cca	caagatcg
O. Avi	--	cttttt	ttctatctgaagga...	395...	-----	acctcggtgcccggaaccc	AAAGGCTCTTTTCAGAGCCAC	TCA	Caagatcg
L. Afr	g	tgtttttt	ttgtttggagag--...	401...	-----	cgcgagccgcaacagaa	CCAAAGGCTCTTTTCAGAGCCAC	CCA	tgatcg
	*		*	*		*	*****	*	**

id=561021 gene=ENSG00000196890 name=HIST3H2BB segment=chr1\_228645808\_228646259\_1 type=EC VIEW

Figure 1: CS=4.5



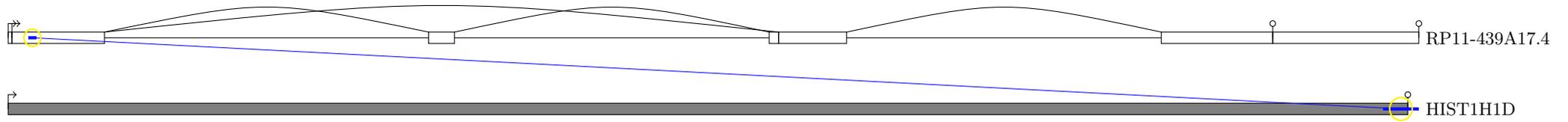
H. Sap	ta	cagctg	ctcttgatgaaaacggc-----	AGTGGCTCTGAAAAGAtCCTTT	-----	agatcgaccacttaaaaata-----	..76..	gatggcgcacag	gttcgtgt
R. Mac	ta	cagctg	ctcttgatgaaaacggc-----	AGTGGCTCTGAAAAGAGCCTTT	-----	agatcgaccacttaaaaata-----	..76..	gatggcgcacag	gttcgtgt
P. Tro	ta	cagctg	ctcttgatgaaaacggc-----	AGTGGCTCTGAAAAGAaCCTTT	-----	aggtcgaccacttaaaaata-----	..76..	gatggcgcacag	gttcgtgt
P. Abe	ta	cagctg	ctcttgatgaaaacggc-----	AGTGGCTCTGAAAAGAGCCTTT	-----	agatcgaccacttaaaaata-----	..76..	gatggcgcacag	gttcgtgt
C. Jac	ta	cagctg	ctcttgatgaaaacgga-----	AGTGGCTCTAAAAGAGCCTTT	-----	agatccaccacttaaacacg-----	..75..	gatggcgcacag	gttcgtgt
M. Mus	ca	cagcta	ctttcatcgacaacgta-----	GGTGGCTCTGAAAAGAGCCTTgTGGG	-----	ggatggaagggaaacagggc-----	..74..	gatggcgcacag	gttgggtgt
R. Nor	ca	cagcta	ctcttattgataacgtagg-----	TGGCTCTGAAAAGAGCCTTTGTGG	gatgaaccagagatagctta-----	-----	..69..	gatggcgcacag	gttgggtgt
C. Por	ta	cagctg	ctcttt-tggaac-----	GTAGGTGGCTCTGAAAAGAGCCTTT	-----	aaggtgaatttagtgtatga-----	..73..	gatggcgcacag	gttgggtgt
O. Cun	ta	cagctg	ctctc-----agcgac-----	AACGTGGgTGGCTCTGAAAAGAGCCTTTaGGT	-----	gactgctatagacacgcgccc-----	..72..	gatggcgcacag	gttcgtgt
C. Fam	ta	cagctg	ctcctcgtgaaatca-----	TGGGTGGCTCTGAAAAGAGCCTTT	-----	aggtggccttctgataaaac-----	..78..	gatggcgcacag	gttgggtgt
F. Cat	ca	cagcta	ctcct-----cgtGAAAa	caTGGGTGGCTCTGAAAAGAGCC	-----	gtaggtggccacttaaaa-----	..81..	gatagcgcacag	gttcgtgt
B. Tau	ca	cagctt	ctttcaagtgtagtc-----	GTGGGTGGCTCTGAAAAGAGCCTTTGgATTG	-----	atggaacctcgagcacagcg-----	..80..	gatggcgcacag	gttcgtgt
E. Cab	ca	cagctg	cttttcatgcaaac-----	TGGGTGGCTCTAAAAGAGCCTTT	-----	agatcgctgcttaataaac-----	..79..	gatggcgcacag	gttgggtgt
S. Sus	ta	caactg	ctcctt-----TTGAAAa	GGTgAGTGGCTCTGAAAAGAGCCTTT	-----	aagatagtctacgtaaaaa-----	..80..	gatggcgcacag	gttcgtgt
O. Avi	ta	cagctg	cttttaagaaa-----	ACGTGGGTGGCTCTGAAAAGAGCCTTTAGATCGT	-----	ctgttttaaaagtacgct-----	..71..	gatggcgcacag	gttcgtgt
L. Afr	ca	cagccg	ttttcgaatgctgtt-----	GTGGGTGGCTCTGAAAAGAGCCTTTG	-----	gatgagatggaacccgagc-----	..87..	gatggcgcacag	gttcgtgt
			** * *	*	***** **			*** ** *****	*** **

id=402330 gene=ENSG00000227193 name=RP11-439A17.4 segment=chr1\_120905007\_120905153\_-1 type=EN

H. Sap	ttgtcctc	attccttatttatt-----	..410..	ctcgcagctgccagcaatcc-----	-----	AAAGGcTCTTTTCAGAGCCACTc-ac	gcttccag
R. Mac	ttgtcctc	attccttttttct-----	..412..	cccgagctgccgacaatcc-----	-----	AAAGGCTCTTTTCAGAGCCACTc-ac	gcttccag
P. Tro	ttgtcctc	attccttatttatt-----	..410..	ctcagctgccgcaatcc-----	-----	AAAGGcTCTTTTCAGAGCCACTc-ac	gcttccag
P. Abe	tcgtcctc	attccttatttatt-----	..410..	ctcgcagctgccgcaatcc-----	-----	AAAGGCTCTTTTCAGAGCCACTc-ac	gcttccag
C. Jac	tcgtcctc	attccttatttatt-----	..411..	ctcgcagctgctgacaatcc-----	-----	AAAGGCTCTTTTCAGAGCCACTcaac	acttccag
M. Mus	ttttagtt	atcctttttcaa-----	..408..	-----cgtttaactcacactcctaa-----	-----	CTCAAAGGCTCTTTTAaGAGCCACCc-ac	actttcct
R. Nor	gagtcact	gcctaagttggt-----	..399..	aagtgagttcctttaactca-----	CTAAcc	CAAAGGCTCTTTTCAGAGCCA-agcac	attctcaa
C. Por	cggcctcc	cttcagctctgtt-----	..421..	ctgtctgcacttcaccccc-----	-----	AAAGGCTCTTTTCAGAGCCACTACc	tctttcag
O. Cun	tggcccac	acttggtttctt-----	..408..	aacagtctcttgctttcaga-----	AACCc	CAAAGGCTCTTTTCAGAGCCACCAGT	T-ctcag
C. Fam	ttgccctg	attcactttgcc-----	..402..	tccg-aggcacatccaaccc-----	-----	AAAGGCTCTTTTCAGAGCCACTTA-c	actgcag
F. Cat	gcattttt	ctttttgtcctg-----	..412..	-----g-agacagatccaacccaaa-----	-----	GGCTCTTTTCAGAGCCACTTAca	TTTC-cg
B. Tau	ctgtcctc	cctttatttctc-----	..402..	-----tgagccgctcgcagcccta-----	CAAAac	CAAAGGCTCTTTTCAGAGCCACTAC-	attttcag
E. Cab	tggcgcac	attccttatttctc-----	..420..	cccacaactaccacacccc-----	-----	AAAGGCTCTTTTCAGAGCCACCc-c	actttcag
S. Sus	ttgtcctc	atttattgtttc-----	..384..	gagccaccatggccgaccc-----	-----	AAAGGCTCTTTTCAGAGCCAcTACC	cTTTCa-g
O. Avi	-----tt	ctgtgtgttcttcccttg...403..	aa-----	actgtgagtcg-gttgcaa	ACGATt	CTAAcGGCTCTTTTAaGAGCCACCcATG	T-cttcag
L. Afr	ccttcttc	ctacctgttatt-----	..415..	tgtgtaggcactgtaaaaca-----	-----	CAAAGGCTCTTTTCAGAGCCACTCAC-	tttccaag
				*	***** **		

id=299073 gene=ENSG00000196331 name=HIST1H2BO segment=chr6\_27861203\_27861669\_1 type=EC

Figure 2: CS=9.6



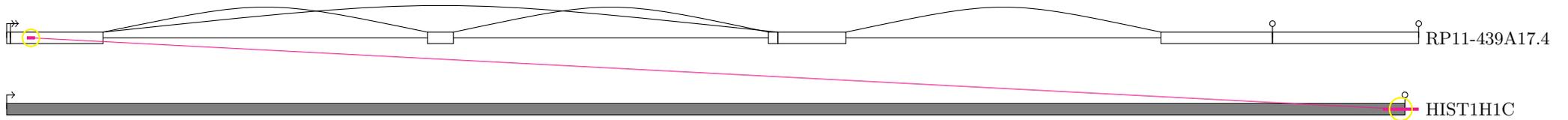
H. Sap	ta	cagctg	ctcttgatgaaaacggca-GTGGCTCTGAAAAGA-----tcctttagatcgaccactta-----...82...gatggcgcacag	gttcgtgt
R. Mac	ta	cagctg	ctcttgatgaaaacggca-GTGGCTCTGAAAAGAGCCTTTAGAT-----cgaccacttaaaaaatagcc...72...gatggcgcacag	gttcgtgt
P. Tro	ta	cagctg	ctcttgatgaaaacggca-GTGGCTCTGAAAAGA-----acctttagtgcgaccactta-----...82...gatggcgcacag	gttcgtgt
P. Abe	ta	cagctg	ctcttgatgaaaacggca-GTGGCTCTGAAAAGAGCCTTTAGAT-----cgaccacttaaaaaatagtc...72...gatggcgcacag	gttcgtgt
M. Mus	ca	cagcta	ctttcatcgacaac-gtaGGTGGCTCTGAAAAGAGCCTTTG-----tgggggatggaagggaaaca-----...78...gatggcgcacag	gttggtgt
R. Nor	ca	cagcta	ctcttattgataac-gtaGGTGGCTCTGAAAAGAGCCTTTgtTGGGatgaaccagagatagcttag-----...68...gatggcgcacag	gttggtgt
C. Por	ta	cagctg	ctcttt-tggaac-gtaGGTGGCTCTGAAAAGAGGCC-----ttaaagtgaaatttagtga-----...76...gatggcgcacag	gttggtgt
O. Cun	ta	cagctg	ctctcagcgacaac-GTGGGTGGCTCTGAAAAGAGCCTTTAGGTT-----gactgctatagacacgccc...72...gatggcgcacag	gttcgtgt
C. Fam	ta	cagctg	ctcctcgtgaaatca-TGGGTGGCTCTGAAAAGAGCCTTTaGGTG-----gccttctgataaaacggggc...73...gatggcgcacag	gttggtgt
F. Cat	ca	cagcta	ctcctcgtgaaaaca-TGGGTGGCTCTGAAAAGAGGCC-----gtaggtgtgctcacttaaaa...81...gatagcgcacag	gttcgtgt
B. Tau	ca	cagctt	ctttcaagtgtagtcGTGGGTGGCTCTGAAAAGAGCCTTTGG-----atgtgatggaacctcgagca-----...85...gatggcgcacag	gttcgtgt
E. Cab	ca	cagctg	cttttcatgcaaca-TGGGTGGCTCTAAAAAGAGCCTTTAGAT-----cgctgcttaataaacgtat...75...gatggcgcacag	gttggtgt
S. Sus	ta	caactg	ctcctttt-GAAAAGGTGaGTGGCTCTGAAAAGAGCCTTTA-----agatagctcactgataaaaaa...79...gatggcgcacag	gttcgtgt
O. Avi	ta	cagctg	ctttttaagaaaac-GTGGGTGGCTCTGAAAAGAGCCTTTAGAT-----cgctgtttttaaagtacg...74...gatggcgcacag	gttcgtgt
L. Afr	ca	cagccg	ttttcgaatgctgtTGTGGGTGGCTCTGAAAAGAGCCTTTGG-----atgagatggaaccccagacc-----...86...gatggcgcacag	gttcgtgt
	*	** *	* ***** *	*** ** *****

id=402330 gene=ENSG00000227193 name=RP11-439A17.4 segment=chr1\_120905007\_120905153\_-1 type=EN

H. Sap	gtagagga	catgctgttctg...727...-----ccttgaaaattttaacggc-----TCTTTTCAGAGCCAC-cca	caggtctc
R. Mac	gtagagaa	cacgccgttctg...714...cgggacgttccgctttgaaa-----ATTTAAAcGGCTCTTTTCAGAGCCAC-cca	taggtctc
P. Tro	gtagagga	catgttgttctg...726...-----ccttgaaaattttaacggc-----TCTTTTCAGAGCCAC-cca	caggtctc
P. Abe	gtagagga	tatgctgttctg...714...cgggacgttccgctttgaaa-----ATTTAAAcGGCTCTTTTCAGAGCCAC-cca	caggtctc
M. Mus	actgggaa	caaccttctctg...715...---gcgtcctgctttgaaaatct-----CAAAcGGCTCTTTTCAGAGCCACC-ca	caacctca
R. Nor	ggttagg	tttccttttctt...691...-----gcttgtaacagcagcaaaagcCCAAAGGCTCTTTTCAGAGCCACC-ca	gagaactc
C. Por	gtgaggaa	tacgccgttctg...716...-aggtcctcgtataatctcaac-----GGCTCTTTTCAGAGCCACC-ca	cgatatca
O. Cun	gccggaga	cacgctgctccg...716...cgggacgtttcgtttgcaa-----AACCTcaAAAGGCTCTTTTCAGAGCCACCCAC-aga	atgctc
C. Fam	gctggagc	cagtcgtcctg...708...-gctcctggatgcttgcgaaa-----TATCAAAGGCTCTTTTCAGAGCCACCCA-cta	aatatc
F. Cat	ctccgaga	cgcgcccccctg...729...-cctgcctcaggtttctcaaa-----GGCTCTTTTCAGAGCCACCCAa	ctattttc
B. Tau	gcccgga	cacgccgttctg...721...---cactcctgctttgaaaacc-----TCAAAGGCTCTTTTCAGAGCCACCCAC-cta	atattc
E. Cab	gcccgga	cacgccgttctg...721...cgggaagtccctttctgaaa-----ATCTcAAAGGCTCTTTTCAGAGCCACCCA-cta	atattc
S. Sus	gcttggga	cacgccattctg...720...---gacctcctgctttgaaaacc-----TAAAGGCTCTTTTCAGAGCCACcCAC	TgcTTT-c
D. Avi	gcccgga	cacgccgttctg...718...cggcacctcctgctttgaaa-----ATCTcAAAGGCTCTTTTCAGAGCCACCCAC-cta	atattc
L. Afr	gcccgga	cacgccgttctg...725...-acgtcctcctgcttc--aaacc-----TCAAAGGCTCTTTTCAGAGCCACCCAC	A-tatctc
		* ** *****	

id=151918 gene=ENSG00000124575 name=HIST1H1D segment=chr6\_26234440\_26235216\_-1 type=EC

Figure 3: CS=13.5



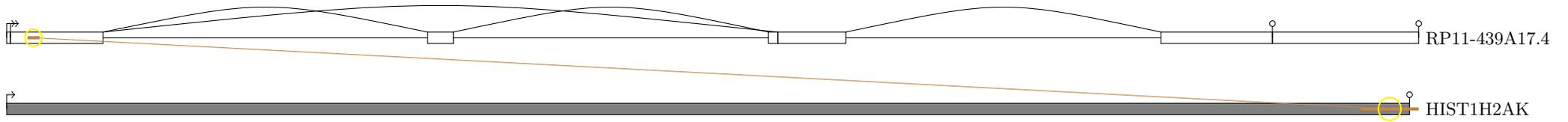
H. Sap	ta	cagctg	ctcttgatgaaaacggca	-----	GTGGCTCTGAAAAGATCCTTT	-----	agatcgaccacttaaaaata	...76...	gatggcgcacag	gttcgtgt		
R. Mac	ta	cagctg	ctcttgatgaaaacggca	-----	GTGGCTCTGAAAAGAGCCTTT	-----	agatcgaccacttaaaaata	...76...	gatggcgcacag	gttcgtgt		
P. Tro	ta	cagctg	ctcttgatgaaaacggca	-----	GTGGCTCTGAAAAGAGCCTTT	-----	agatcgaccacttaaaaata	...76...	gatggcgcacag	gttcgtgt		
P. Abe	ta	cagctg	ctcttgatgaaaacggca	-----	GTGGCTCTGAAAAGAGCCTTT	-----	agatcgaccacttaaaaata	...76...	gatggcgcacag	gttcgtgt		
C. Jac	ta	cagctg	ctcttgatgaaaacggca	-----	GTGGCTCTAAAAAGAGCCTTT	-----	agatccaccacttaaacacg	...75...	gatggcgcacag	gttcgtgt		
M. Mus	ca	cagcta	ctttcatcgacaacgta	-----	GGTGGCTCTGAAAAGAGCCTTT	gTGGG	ggatggaagggaac-agggc	---...74...	gatggcgcacag	gttggtgt		
C. Por	ta	cagctg	ctcttttggaaac-gta	-----	GGTGGCTCTGAAAAGAGCCTTT	-----	aagtgatatttagttagtga	...73...	gatggcgcacag	gttggtgt		
O. Cun	ta	cagctg	ctctcagcgaaa	-----	CGTG	GGTGGCTCTGAAAAGAGCCTTT	gGTT	gactgctataga-cacgcgc	---...72...	gatggcgcacag	gttcgtgt	
C. Fam	ta	cagctg	ctcctcgtgaaatcatg	-----	GGTGGCTCTGAAAAGAGCCTTT	-----	agtggtgcttctgataaaa	...78...	gatggcgcacag	gttggtgt		
F. Cat	ca	cagcta	ctcctcgtgaaacatg	-----	GGTGGCTCTGAAAAGAGCC	-----	gtaggtggtccacttaaaa	---...81...	gatggcgcacag	gttcgtgt		
B. Tau	ca	cagctt	ctttc----	aagtgta	GTCG	GGTGGCTCTGAAAAGAGCCTTT	GG	-----	attgatggaacctcgagca	---...85...	gatggcgcacag	gttcgtgt
E. Cab	ca	cagctg	cttttcatgcaaacatg	-----	GGTGGCTCTAAAAAGAGCCTTT	-----	agatcgctgcttaataaac	...79...	gatggcgcacag	gttggtgt		
S. Sus	ta	caactg	ctccttttgaaggtga	-----	GTGGCTCTGAAAAGAGCCTTT	-----	aagatagctctacgtaaaaa	...80...	gatggcgcacag	gttcgtgt		
O. Avi	ta	cagctg	cttttaagaaaacg	-----	TGGGTGGCTCTGAAAAGAGCCTTT	-----	agatcgctgtttttaaag	...78...	gatggcgcacag	gttcgtgt		
L. Afr	ca	cagccg	ttttc----	gaatgctg	TTGTG	GGTGGCTCTGAAAAGAGCCTTT	GG	-----	atgagatggaacccgagcc	---...86...	gatggcgcacag	gttcgtgt

id=402330 gene=ENSG00000227193 name=RP11-439A17.4 segment=chr1\_120905007\_120905153\_-1 type=EN

H. Sap	cgctgctt	catcggcgcttt	---...677...	-----	acgctacttctaa	-----	aacca	-----	AAAGGc	TCTTTTCAGAGCCAC	---ca	ctgatctc	
R. Mac	cgctgttt	catcggcgcttt	---...678...	-----	cgctgcttcaaa	-----	aaacca	-----	AAAGGc	TCTTTTCAGAGCCAC	---ca	ctgatctc	
P. Tro	cgctgctt	catcggcgcttt	---...677...	-----	acgctacttctaa	-----	aacca	-----	AAAGGc	TCTTTTCAGAGCCAC	---ca	ctgatctc	
P. Abe	cgctgctt	catcggcgcttt	---...677...	-----	acgctacttctaa	-----	aacca	-----	AAAGGc	TCTTTTCAGAGCCAC	---ca	ctgatctc	
C. Jac	cgcggtt	catcggcgcttt	---...676...	-----	acgctgcttctaa	-----	aacca	-----	AAAGGc	TCTTTTCAGAGCCAC	---ca	ctgatctc	
M. Mus	cgctactc	tatcggcgctt	---...667...	-----	taggctgctcc	-----	cctaacaa	TCCA	AAAGGc	TCTTTTCAGAGCCAC	---a	ctccactc	
C. Por	cagcgctt	cccagcaccgc	---...661...	-----	gcgactgcttctc	-----	aaccc	-----	AAAGGc	TCTTTTCAGAGCCAC	---a	ctggtctc	
O. Cun	cgccgctc	catcgggtgctgc	---...667...	agtagactgctgcttccca	-----	-----	AACC	cc	AAAGGc	TCTTTTCAGAGCCAC	---a	cgactc	
C. Fam	cgcaccta	---ccgctgttcc	...679...	-----	gttgcttctaa	-----	aacc	-----	AAAGGc	TCTTTTCAGAGCCAC	---a	ctcctctc	
F. Cat	cgcgacac	ccacggcgctct	---...687...	-----	ctgcttctga	-----	aacc	-----	GGC	TCTTTTCAGAGCCAC	---a	ctgacctc	
B. Tau	cgagctt	catcggcgcttt	---...680...	-----	aatcgtcgttctaa	-----	aacc	-----	CCAAA	aGGC	TCTTTTCAGAGCCAC	acTG	AT
E. Cab	cgagctc	catcgggtgcttt	---...679...	-----	cgctgcttctac	-----	aacc	-----	AAAGGc	TCTTTTCAGAGCCAC	---a	caggtctc	
S. Sus	cgcgctg	catcggcgcttt	---...682...	-----	cgctgcttctaa	-----	aacc	-----	AAAGGc	TCTTTTCAGAGCCAC	---ca	cggtctc	
O. Avi	ctctgctt	ccgctcgaatt	---...705...	-----	ttcgaagctcgcacaacc	-----	-----	-----	AAAGGCT	TCTTTTCAGAGCCAC	CCAA	aa	
L. Afr	tgtctctc	cactggctctct	---...768...	-----	taaacgctgcttctaa	-----	aac	-----	CCAAA	cGGC	TCTTTTCAGAGCCAC	CACAG	---

id=184174 gene=ENSG00000187837 name=HIST1H1C segment=chr6\_26055968\_26056699\_-1 type=EC

Figure 4: CS=9



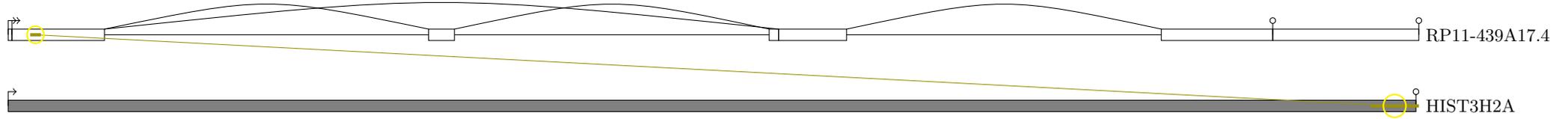
H. Sap	ta	cagctg	ctcttgatgaaaacggca	-----GTGGCTCTGAAAAGATCCTTT	-----	agatcgaccacttaaaaata	....76...	gatggcgcacag	gttcgtgt
R. Mac	ta	cagctg	ctcttgatgaaaacggca	-----GTGGCTCTGAAAAGAGCCTTT	-----	agatcgaccacttaaaaata	....76...	gatggcgcacag	gttcgtgt
P. Tro	ta	cagctg	ctcttgatgaaaacggca	-----GTGGCTCTGAAAAGAGCCTTT	-----	agatcgaccacttaaaaata	....76...	gatggcgcacag	gttcgtgt
P. Abe	ta	cagctg	ctcttgatgaaaacggca	-----GTGGCTCTGAAAAGAGCCTTT	-----	agatcgaccacttaaaaata	....76...	gatggcgcacag	gttcgtgt
C. Jac	ta	cagctg	ctcttgatgaaaacggaa	-----GTGGCTCTAAAAAGAGCCTTT	-----	agatccaccacttaaacacg	....75...	gatggcgcacag	gttcgtgt
M. Mus	ca	cagcta	ctttcatcgacaacgta	-----GGTGGCTCTGAAAAGAGCCTTT	-----	gtgggggatggaagggaac	....79...	gatggcgcacag	gttggtgt
R. Nor	ca	cagcta	ctcttattgataacgta	-----GGTGGCTCTGAAAAGAGCCTTTG	-----	ttgggatgaac-cagagatag	....73...	gatggcgcacag	gttggtgt
C. Por	ta	cagctg	ctcttt-tggaaac-gta	-----GGTGGCTCTGAAAAGAGCCTTT	-----	aaggtgaatttagtgatga	....73...	gatggcgcacag	gttggtgt
O. Cun	ta	cagctg	ctctcagcgacaac	-----GTGGGTGGCTCTGAAAAGAGCCTTTaGGTT	-----	gactgctatagacacgcgcc	....72...	gatggcgcacag	gttcgtgt
C. Fam	ta	cagctg	ctctcgtgaaatc	-----a-TGGGTGGCTCTGAAAAGAGCCTTT	-----	aggtgacctctgataaac	....78...	gatggcgcacag	gttggtgt
B. Tau	ca	cagctt	ctttc	-----aagtGTAGtcGTGGGTGGCTCTGAAAAGAGCCTTTGGaTTTGATGG	-----	aacctcgagcacagcgaca	....76...	gatggcgcacag	gttcgtgt
E. Cab	ca	cagctg	cttttcatgcaaacatggg	-----TGGCTCTAAAAAGAGCCTTT	-----	agatcgctgcttaataaac	....79...	gatggcgcacag	gttggtgt
S. Sus	ta	caactg	ctcctttgaa	-----AAGGTGaGTGGCTCTGAAAAGAGCCTTT	-----	aagatagctacgtaaaaaa	....80...	gatggcgcacag	gttcgtgt
O. Avi	ta	cagctg	cttttaagaaaac	-----GTGGGTGGCTCTGAAAAGAGCC	-----	tttagatcgtctgttttaa	....81...	gatggcgcacag	gttcgtgt
L. Afr	ca	cagcgg	ttttc	-----gaatgctgtt-GTGGGTGGCTCTGAAAAGAGCCTTTGGaTGAGaTGGA	-----	ccccgagccgagtgagtgagtg	....75...	gatggcgcacag	gttcgtgt
	*	** *	*	***** **		***** **		***** **	*** **

id=402330 gene=ENSG00000227193 name=RP11-439A17.4 segment=chr1\_120905007\_120905153\_-1 type=EN

H. Sap	tttacgtc	atgtcgggacgt...404...	----catacct-cggtccaaccaa	-----AAAGGtTCTTTTCAGAGCCAC	-cta	ctttttca
R. Mac	tatttgtc	atgtcgggacgt...404...	----catacct-cggtccaaccaa	-----AAAGGTTCTTTTCAGAGCCAC	-cta	ctttttca
P. Tro	tttacgtc	atgtcgggacgt...404...	----catacct-cggtccaaccaa	-----AAAGGTTCTTTTCAGAGCCAC	-cta	ctttttca
P. Abe	ttttcgtc	atgtcgggacgt...404...	----catacct-cggtccaaccaa	-----AAAGGTTCTTTTCAGAGCCAC	-cta	ctttttca
C. Jac	tagtcgct	atgtcgggacgt...402...	----ctcatct-cgtttcaaccaa	-----AAAGGTTCTTTTCAGAGCCAC	-ctc	ctttttca
M. Mus	ttttacc	atgtcgggacgt...396...	----caccgaaaagaaaaaaa	-----AAAGGCTCTTTTCAGAGCCATC	-ca	cagtgtct
R. Nor	tgtttgtc	atgtcgggacgt...386...	----gccgttcactcatccagaac	-----CAAAGGCTCTTTTCAGAGCCATC	-ca	caatgtct
C. Por	attcagct	atgtcgggacgt...401...	----atctatattccttgaaaaac	-----AAAGGCTCTTTTCAGAGCCACC	-ca	gtttttct
O. Cun	gaatcagc	atgtcgggacgt...404...	----ccccccctcaggtgcaca	-----AATCAAAGGCTCTTTTCAGAGCCACCCAC	-tcttttc	
C. Fam	ctctcgtc	atgtcgggacgt...389...	----gtttccacctgcccaagcca	-----AAAGGCTCTTTTCAGAGCCACCCA	-	cttaatga
B. Tau	ctctcatc	atgtcgggacgt...388...	----gcattgcttgaaactcaaac	-----CTGTCAAACCAAAAGGCTCTTTTCAGAGCCACCCAC	tTTAT	-ca
E. Cab	ccctcatc	atgtcgggacgt...403...	----tatatctcctgtccaaccaa	-----AAAGGCTCTTTTCAGAGCCAC	-acca	ctttatca
S. Sus	cattgatc	atgtcgggacgt...399...	----aactcagacct-tcccaaac	-----AAAGGCTCTTTTCAGAGCCAC	cTAC	TTT
O. Avi	nnnnnna	atgtcgggacgt...383...	----gaaaggtgaagaaaaaac	-----GGCTCTTTTCAGAGCCAACTTA	C	attgtca
L. Afr	gccatatac	atgtcgggacgt...392...	----gc-tttccaacaactcaaac	-----TTCCATTCAAaCC-AAAGGCTCTTTTCAGAGCCACCCAC		-tttatca
		**** ** *		** *****		

id=74688 gene=ENSG00000184348 name=HIST1H2AK segment=chr6\_27805658\_27806117\_-1 type=EC

Figure 5: CS=9



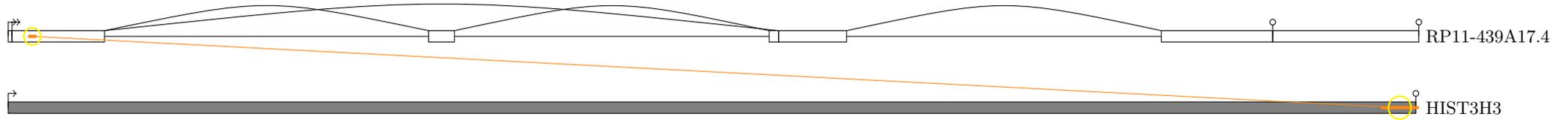
H. Sap	ta	cagctg	ctcttgatgaaaacggca-GTGGCTCTGAAAAGaCCTTTA-----gatcgaccacttaaaaatat----..75..gatggcgcacag	gttcgtgt
R. Mac	ta	cagctg	ctcttgatgaaaacggca-GTGGCTCTGAAAAGAGCCTTTA-----gatcgaccacttaaaaatat----..75..gatggcgcacag	gttcgtgt
P. Tro	ta	cagctg	ctcttgatgaaaacggca-GTGGCTCTGAAAAGAaCCTTTA-----ggtcgaccacttaaaaatat----..75..gatggcgcacag	gttcgtgt
P. Abe	ta	cagctg	ctcttgatgaaaacggca-GTGGCTCTGAAAAGAGCCTTTA-----gatcgaccacttaaaaatat----..75..gatggcgcacag	gttcgtgt
C. Jac	ta	cagctg	ctcttgatgaaaacggaa-GTGGCTCTAAAAaAGAGCCTTT-----agatccaccacttaaacacg----..75..gatggcgcacag	gttcgtgt
M. Mus	ca	cagcta	ctttcatogacaacgta-GGTGGCTCTGAAAAGAGCCTTTGtgggggatggaaggaaaca-----..78..gatggcgcacag	gttggtgt
R. Nor	ca	cagcta	ctcttattgataacgta-GGTGGCTCTGAAAAGAGCCTTTG-----ttgggatgaac--cagagatag-----..73..gatggcgcacag	gttggtgt
C. Por	ta	cagctg	ctcttttggaaac--gtaGGTGGCTCTGAAAAGAGCCTTTaGGTG-----aatttagtgtatgatttagg----..67..gatggcgcacag	gttggtgt
O. Cun	ta	cagctg	ctctcagcgac-AACGTGGGTGGCTCTGAAAAGAGCCTTTa-GGTT-----gactgctatagacacgcgc...72..gatggcgcacag	gttcgtgt
C. Fam	ta	cagctg	ctcctcgtgaaatca-TGGGTGGCTCTGAAAAGAGCCTTTa-GGTG-----gccttctgataaaacggggc...73..gatggcgcacag	gttggtgt
F. Cat	ca	cagcta	ctcctcgtga-AAACaTGGGTGGCTCTGAAAAGAGCC-----gttagtggtccacttaaaa-----..81..gatagcgcacag	gttcgtgt
B. Tau	ca	cagctt	ctttcaagtgtagtcGTGGGTGGCTCTGAAAAGAGCCTTTGG-----atattgatggaacctcgagca-----..85..gatggcgcacag	gttcgtgt
E. Cab	ca	cagctg	cttttcatgcaaca-TGGGTGGCTCTAAAAaGAGCCTTT-----agatcgctgcttaataaac-----..79..gatggcgcacag	gttggtgt
S. Sus	ta	caactg	ctccttttgaaaagtgta-GTGGCTCTGAAAAGAGCCTTT-----aagatagtctacgtaaaaa-----..80..gatggcgcacag	gttcgtgt
O. Avi	ta	cagctg	cttttaagaaaac-GTGGGTGGCTCTGAAAAGAGCCTTT-----agatcgtctgtttttaaag-----..78..gatggcgcacag	gttcgtgt
L. Afr	ca	cagccg	ttttcgaatGCTGttGTGGGTGGCTCTGAAAAGAGCCTTTGG-----atgagatggaaccccgagcc-----..86..gatggcgcacag	gttcgtgt
		** * *	* ***** **	** * * **

id=402330 gene=ENSG00000227193 name=RP11-439A17.4 segment=chr1\_120905007\_120905153\_-1 type=EN

H. Sap	tttttagt	ctcgttttcgg-----..439..-----cggggcccctttgatggaca--TAAAGGcTCTTTTCAGAGCCACcta	ctatctcg
R. Mac	ctttcggg	ctcgttttcgga-----..439..-----cggggcccctttgatggaca--TAAAGGCTCTTTTCAGAGCCACcca	ccatctcg
P. Tro	ttttcagt	ctcgttttcgg-----..439..-----cggggcccctttgatggaca--TAAAGGcTCTTTTCAGAGCCACcta	ccatctcg
P. Abe	ttttcagt	ctcgttttcgg-----..439..-----cggggcccctttgatggaca--TAAAGGCTCTTTTCAGAGCCACcta	ccatctcg
C. Jac	ttttcagt	ctcgcctttcgg-----..441..-----gggaccctttgatggacacc-AAAGGCTCTTTTCAGAGCCACcca	tcgtttcg
M. Mus	tcgctagg	tttcttttctgt-----..439..-----agtgcgacttttacagacac-CAAAGGCTCTTTTCAGAGCCACCca	caacctca
R. Nor	-tttttg	ccagctttcttct-----..437..-----tagagcaactttacggacac-CAAAGGCTCTTTTCAGAGCCACCcc	caacctca
C. Por	gcttctgt	tctgctgttccg-----..347..--gaccctcggccagc--aacgga-CATCAA-GGCTCTTTTTCAGAGCCACCca	ccatctca
O. Cun	-tgtgagt	tcacgctcccacg-----..408..ggcgtccataaccttatta--AACCAAAGGCTCTTTTCAGAGCCACCca	ACGTT-cc
C. Fam	ctgtgggc	gttctctcccgg-----..451..gcgcccacagggccccttga--CACCAAAGGCTCTTTTaaGAGCCACCCA	cagtctcc
F. Cat	ctttgggt	ctgtcttctcgt-----..459..-----ggggccccttga--caccaaa-GGCTCTTTTCAGAGCCACCCA	cgGTTTca
B. Tau	-ttggtgg	tctgcttttggc-----..453..-tcccggggggccccttga--ca-CCAAAGGCTCTTTTCAGAGCCACCCA	Cagtgctc
E. Cab	----tagg	tcttttctctgttccac..439..-----ccccgggcacccttga--cacc-AAAGGCTCTTTTCAGAGCCACCCA	cagttctc
S. Sus	cttggggt	gttatttctcga-----..458..-----ctggggggccccttga--cacc-AAAGGCTCTTTTCAGAGCCACCCA	cagttctc
O. Avi	gttgggt	tctgtttttgg-----..456..-----cccaggggctccttga--cacc-AAAGGCTCTTTTaaGAGCCACCCA	Cagtgctc
L. Afr	ttctgagt	gctgctttccat-----..455..-----cggacaagtgtcttctgaaaTCAAAGGCTCTTTTCAGAGCCACCCA	CCGGTtca
		** ***** **	*

id=244689 gene=ENSG00000181218 name=HIST3H2A segment=chr1.228645065.228645560\_-1 type=EC VIEW

Figure 6: CS=9.6



H. Sap	ta	cagctg	ctctt-gatgaaacggca	<b>GTGGCTCTGAAAAGATCCTTT</b>	-----	agatcgaccacttaaaaata---	..76..	gatggcgcacag	gttcgtgt	
R. Mac	ta	cagctg	ctctt-gatgaaacggca	<b>GTGGCTCTGAAAAGAGCCTTT</b>	-----	agatcgaccacttaaaaata---	..76..	gatggcgcacag	gttcgtgt	
P. Abe	ta	cagctg	ctctt-gatgaaacggca	<b>GTGGCTCTGAAAAGAGCCTTT</b>	-----	agatcgaccacttaaaaata---	..76..	gatggcgcacag	gttcgtgt	
M. Mus	ca	cagcta	ctttc-atcgacaacgta	<b>GGTGGCTCTGAAAAGAGCC</b>	-----	tttgtggggatggaa---ggga---	..82..	gatggcgcacag	gttggtgt	
R. Nor	ca	cagcta	ctctt-attgataacgta	<b>GGTGGCTCTGAAAAGAGCC</b>	-----	tttgtgggatgaaccagag---	..77..	gatggcgcacag	gttggtgt	
C. Por	ta	cagctg	ctctt-t-tggaaacgta	<b>GGTGGCTCTGAAAAGAGCCTTT</b>	-----	aaggtgaatttagtgatga---	..73..	gatggcgcacag	gttggtgt	
O. Cun	ta	cagctg	ctctc-agcgacaacgt	<b>GGTGGCTCTGAAAAGAGCCTTT</b>	<b>GGTTG</b>	actgctatagacacgcgcc---	..71..	gatggcgcacag	gttcgtgt	
C. Fam	ta	cagctg	ctcct-c <b>GTGAAA</b> c	<b>ATGGGTGGCTCTGAAAAGAGCCTTT</b>	-----	aggtggccttctgataaaac---	..78..	gatggcgcacag	gttggtgt	
F. Cat	ca	cagcta	ctcct-cgtgaaacatg	<b>GGTGGCTCTGAAAAGAGCCGTTAGG</b>	-----	tggccacttaaaagcacag...	..75..	gatagcgcacag	gttcgtgt	
B. Tau	ca	cagctt	ctttcaagtgtagctg	<b>GGTGGCTCTGAAAAGAGCCTTTG</b>	<b>atTTGA</b>	-----	tggaaacctcgagcacagc...	..79..	gatggcgcacag	gttcgtgt
E. Cab	ca	cagctg	ctttt-catgcaaacatg	<b>GGTGGCTCTAAAAGAGCCTTT</b>	-----	agatcgccctgcttaataaac---	..79..	gatggcgcacag	gttggtgt	
S. Sus	ta	caactg	ctcct-tttgaa <b>AGGTGA</b>	<b>TGGCTCTGAAAAGAGCCTTT</b>	-----	aagatagtctacgtaaaaa---	..80..	gatggcacacag	gttcgtgt	
L. Afr	ca	cagccg	ttttcgaatgctgtt	<b>GTGGGTGGCTCTGAAAAGAGCCTTTGG</b>	-----	atgagatggaaccccgagc---	c..86..	gatggcgcacag	gttcgtgt	
			* * * *	***** **				*** ** **	*** **	

id=402330 gene=ENSG00000227193 name=RP11-439A17.4 segment=chr1\_120905007\_120905153\_-1 type=EN

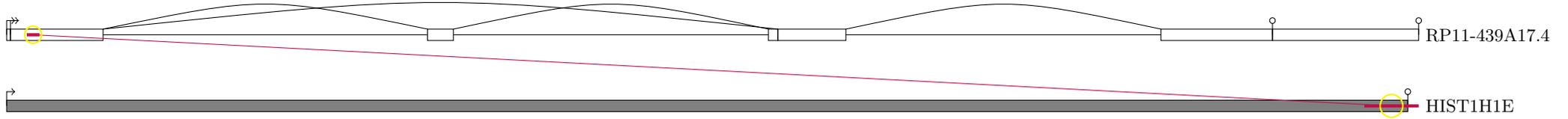
H. Sap	tggattc	atgcccgaacc...	422...	ggttgcgca-----	acgttcacccc-----	<b>AAAGGCTCTTTT</b>	<b>aAGAGCCAC</b>	-----	ccacct	ggtcgaag
R. Mac	tcaaatc	atgcccgaacc...	422...	ggttgcgca-----	acgttcacccc-----	<b>AAAGGCTCTTTT</b>	<b>aAGAGCCAC</b>	-----	ccacct	ggtcggaa
P. Abe	tcagactc	atgcccgaacc...	422...	ggttgcgca-----	acgttcacccc-----	<b>AAAGGCTCTTTT</b>	<b>aAGAGCCAC</b>	-----	ccacct	ggtcggaa
M. Mus	tcaggaag	atggcacgcacc...	409...	gcaccgctca-----	t---gaaccaaac-----	<b>GGCTCTTTT</b>	<b>CAGAGCCACC</b>	-----	caacag	agtacaaa
R. Nor	ccaggaag	atggcacgcacc...	413...	tgctca-----	tcaaccaacccaac-----	<b>GGCTCTTTT</b>	<b>CAGAGCCACC</b>	-----	caacag	attcggaa
C. Por	ggtactac	atggctcgta...	401...	agcgattac-----	actctgacc-----	<b>AAAGGCTCTTTT</b>	<b>aAGAGCCACC</b>	-----	caatt	gtttcaag
O. Cun	agagagct	atggcacgcacg...	409...	tgccctgacgtctcactgctg-----	<b>TAACC</b>	<b>AAAGGCTCTTTT</b>	<b>CAGAGCCACC</b>	-----	c-cct	ggtcggaa
C. Fam	accagccc	atggctcgacg...	406...	ttcaa-----	agcttgcctccc-----	<b>AAAGGCTCTTTT</b>	<b>CAGAGCCACC</b>	<b>ttTCATTTTCAC</b>	cg---	-----
F. Cat	tgcaagcc	atggctcgacg...	414...	ccctga-----	gtcgtcgtctccc-----	<b>CCTAAAGGCTCTTTT</b>	<b>CAGAGCCACC</b>	-----	acca	gtccaaa
B. Tau	gcagggc	atggcccgaacg...	407...	gcgtacgtg-----	actgctgatct <b>TTGA</b>	<b>CCAAAGGCTCTTTT</b>	<b>CAGAGCCACT</b>	-----	agct	gctcaaaa
E. Cab	ctggggct	atggctcgacg...	407...	gcagtcgc-----	actctcacc-----	<b>AAAGGCTCTTTT</b>	<b>aAGAGCCACC</b>	-----	acct	gctcaaaa
S. Sus	gagaagtc	atggctcgta...	407...	ctctttccg-----	actttaacc-----	<b>AAAGGCTCTTTT</b>	<b>CAGAGCCA</b>	<b>aTTACCT</b>	-----	ggtctatg
L. Afr	ggccagct	atggctcgac...	417...	gag-----	actgctctctatcgaa	<b>CCAAAGGCTCTTTT</b>	<b>CAGAGCCACC</b>	<b>AT</b>	-----	g-tgaaa
			**** * *			***** **				

id=206526 gene=ENSG00000168148 name=HIST3H3 segment=chr1\_228612546\_228613026\_-1 type=EC VIEW

Figure 7: CS=10.14







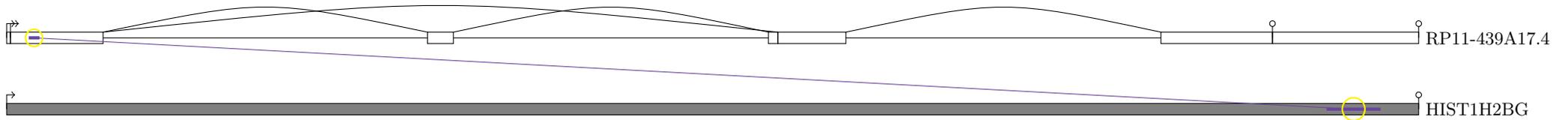
H. Sap	ta	cagctg	ctctt-gatgaaaacggca-GTGGCTCTGAAAAGAtCCTTT	-----	agatcgaccacttaaaaata...76...	gatggcgcacag	gttcgtgt		
R. Mac	ta	cagctg	ctctt-gatgaaaacggca-GTGGCTCTGAAAAGAGCCTTT	-----	agatcgaccacttaaaaata...76...	gatggcgcacag	gttcgtgt		
P. Tro	ta	cagctg	ctctt-gatgaaaacggca-GTGGCTCTGAAAAGAAaCCTTT	-----	aggtcgaccacttaaaaata...76...	gatggcgcacag	gttcgtgt		
P. Abe	ta	cagctg	ctctt-gatgaaaacggca-GTGGCTCTGAAAAGAGCCTTT	-----	agatcgaccacttaaaaata...76...	gatggcgcacag	gttcgtgt		
C. Jac	ta	cagctg	ctctt-gatgaaaacggaa-GTGGCTCTAAAAGAGCCTTT	-----	agatccaccacttaaacacg...75...	gatggcgcacag	gttcgtgt		
M. Mus	ca	cagcta	ctttc-atcgacaacgta-GGTGGCTCTGAAAAGAGCCTTT	gTGGG	ggatggaagggaaac-agggc-----	...74...	gatggcgcacag	gttgggtgt	
R. Nor	ca	cagcta	ctctt-attgataacgta-GGTGGCTCTGAAAAGAGCCTTT	gtTGGG	gatgaaccagagatagcttag-----	...68...	gatggcgcacag	gttgggtgt	
C. Por	ta	cagctg	ctctt-ttggaaac-gtaGGTGGCTCTGAAAAGAGCCTTT	-----	aaggtgaatttagttagtga--...73...	gatggcgcacag	gttgggtgt		
O. Cun	ta	cagctg	ctctc-agcgacaa-CGTGGGTGGCTCTGAAAAGAGCCTTT	aGGTTG	-actgctatagacacgcgccc-----	...71...	gatggcgcacag	gttcgtgt	
C. Fam	ta	cagctg	ctcct-cgtgaaatca-TGGGTGGCTCTGAAAAGAGCCTTT	---AGG	-----	tggccttctgataaaacggg...75...	gatggcgcacag	gttgggtgt	
F. Cat	ca	cagcta	ctcct-cgtgaaaaca-TGGGTGGCTCTGAAAAGAGCC	-----	gttaggtgggtccacttaaaa-----	...81...	gatagcgcacag	gttcgtgt	
B. Tau	ca	cagctt	ctttcaagtgtagtcg-TGGGTGGCTCTGAAAAGAGCCTTT	---GG	-atattgatggaacctcgagca-----	...85...	gatggcgcacag	gttcgtgt	
E. Cab	ca	cagctg	ctttt-catgcaaac-ATGGGTGGCTCTAAAAGAGCCTTT	-----	agatcgctgcttaataaac...79...	gatggcgcacag	gttgggtgt		
S. Sus	ta	caactg	ctcct-tttgaaaagtgta-GTGGCTCTGAAAAGAGCCTTT	-----	aagatagctctacgtaaaaa...80...	gatggcgcacag	gttcgtgt		
O. Avi	ta	cagctg	ctttt-taagaaaacg-TGGGTGGCTCTGAAAAGAGCCTTT	-----	agatcgctgcttttttaaaag...78...	gatggcgcacag	gttcgtgt		
L. Afr	ca	cagcgg	ttttcgaatgctgttg-TGGGTGGCTCTGAAAAGAGCCTTT	---GG	-atgagatggaaccccgagcc-----	...86...	gatggcgcacag	gttcgtgt	
			*** *	*	*	***** ***** **	*	*** ** *****	*** ****

id=402330 gene=ENSG00000227193 name=RP11-439A17.4 segment=chr1\_120905007\_120905153\_-1 type=EN

H. Sap	-g	cggtcg	agtcccgccag...729...-----	ttagaagccaacacaacc-	AAAGGC-	TCTTTTCAGAGCCACcca	ccgctctc
R. Mac	-g	cggtcg	agtcccgccag...731...-----	ttagaagctcaacacaacc-	AAAGGC-	TCTTTTCAGAGCCACcca	ccgctttc
P. Tro	-g	cggtcg	agtcccgccag...729...-----	ttagaagccaacacaacc-	AAAGGC-	TCTTTTCAGAGCCACcca	ccgctctc
P. Abe	-g	cggtcg	agtcccgccag...729...-----	ttagaagccaacacaacc-	AAAGGC-	TCTTTTCAGAGCCACcca	ccgctctc
C. Jac	-g	cggtcg	agtcccgccag...729...-----	ttagaagctcaacacaacc-	AAAGGC-	TCTTTTCAGAGCCACcca	ccatctc
M. Mus	-g	cggtcg	agtcccgccag...719...-actgcttagaagccaacaa-	CCCAAAGGC	-TCTTTTCAGAGCCACCca	caactctc	
R. Nor	-g	gagcctg	agcaaaggagca...729...-gcttgtaacagcagaagc	CCCAAAGGC	-TCTTTTCAGAGCCACCca	gagaactc	
C. Por	cg	gg-tcg	agtatcgccag...722...-ctgctagttccaccaacc-	AAAGGC-	TCTTTTCAGAGCCACCca	cacttttc	
O. Cun	-g	cggtcg	agtcccgccag...716...gccaactgcttagctgaaca-	CAACCc	AAAGGC-TCTTTTCAGAGCCACCCA	TGgatctc	
C. Fam	-g	cagctca	actccgagactc...694...-acagagtagtttaggactct	TTTAAAGGC	-TCTTTTCAGAGCCACCCA	aacctctg	
F. Cat	-g	cggtcg	agtcccgccag...725...-gaagctcaacacaacc-aaa-	GGC	-TCTTTTCAGAGCCACCCA	cagacttc	
B. Tau	-g	cggtcg	agtcccgccag...726...-gcttcgaagctcgacacaac-	CCCAAAGGC	-TCTTTTCAGAGCCACCCA	aagatctc	
E. Cab	-g	ctgccc	agtcccgccag...725...-ttagaagctcaacacaacc-	AAAGGC-	TCTTTTCAGAGCCACCCA	Tagatctc	
S. Sus	-g	cggtcg	agtcccgccag...727...-ttacaagctctacacaacc-	AAAGGC-	TCTTTTCAGAGCCACcca	cagatctc	
O. Avi	-g	cggtcg	agtcccgccag...728...-ttcgaagctcgacacaacc-	AAAGGC-	TCTTTTCAGAGCCACCCA	aagatctc	
L. Afr	-g	cagcgg	agtcccgccag...726...-gcttagaggctaataacaac-	CCCAAAGGC	-TCTTTTCAGAGCCACCCA	gagatctc	
			* *	*	** ** *	*****	*

id=310748 gene=ENSG00000168298 name=HIST1H1E segment=chr6\_26156559\_26157343.1 type=EC

Figure 9: CS=4.8



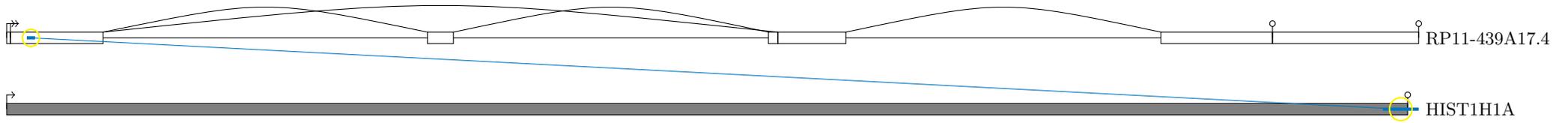
H. Sap	ta	cagctg	ctcttgatgaaaac--ggc--	AGTGGCTCTGAAAAGA	tCCTTT	-----	agatcgaccacttaaaaata	-----	..76..	gatggcgcacag	gttcgtgt
R. Mac	ta	cagctg	ctcttgatgaaaac--ggc--	AGTGGCTCTGAAAAGAGCCTTT	-----	-----	agatcgaccacttaaaaata	-----	..76..	gatggcgcacag	gttcgtgt
P. Tro	ta	cagctg	ctcttgatgaaaac--ggc--	AGTGGCTCTGAAAAGA	aCCTTT	-----	aggtcgaccacttaaaaata	-----	..76..	gatggcgcacag	gttcgtgt
P. Abe	ta	cagctg	ctcttgatgaaaac--ggc--	AGTGGCTCTGAAAAGAGCCTTT	-----	-----	agatcgaccacttaaaaata	-----	..76..	gatggcgcacag	gttcgtgt
C. Jac	ta	cagctg	ctcttgatgaaaac--gga--	AGTGGCTCTAAA	aAGAGCCTTT	-----	agatccaccacttaaacacg	-----	..75..	gatggcgcacag	gttcgtgt
M. Mus	ca	cagcta	ctttcatcgacaacgta	GGTGGCTCTGAAAAGAGCCTTT	TGGG	-----	ggatggaaggaa--acagggc	-----	..74..	gatggcgcacag	gttggtgt
R. Nor	ca	cagcta	ctcttattgataac	GTAGGTGGCTCTGAAAAGAGCCTTTG	TTGGGA	tgaaccagagatagcttagg	-----	..67..	gatggcgcacag	gttggtgt	
C. Por	ta	cagctg	ctcttt-tggaaacgtaggt	GGCTCTGAAAAGAGCCTTT	-----	-----	aagtgatatttagtgatga	-----	..73..	gatggcgcacag	gttggtgt
C. Fam	ta	cagctg	ctcctcgtgaaatc	ATGGGTGGCTCTGAAAAGAGCCTTT	-----	-----	aggtggcctctgataaaac	-----	..78..	gatggcgcacag	gttggtgt
F. Cat	ca	cagcta	ctcctcgtgaaaaca	TGGGTGGCTCTGAAAAGAGCC	-----	-----	gttaggtggctcacttaaaa	-----	..81..	gatagcgcacag	gttcgtgt
B. Tau	ca	cagctt	ctttc	aagtgtagctGTGGGTGGCTCTGAAAAGAGCCTTTG	aTTGATGG	aacctcgagcacagcgaca	-----	..76..	gatggcgcacag	gttcgtgt	
E. Cab	ca	cagctg	cttttcagcaaaaca	TGGGTGGCTCTAAA	aGAGCCTTT	-----	agatcgctgcttaataaac	-----	..79..	gatggcgcacag	gttggtgt
S. Sus	ta	caact-	GCTC	ctTTGAAAAGGTGAGTGGCTCTGAAAAGAGCCTTT	-----	-----	aagatagctcactgataaaa	-----	..80..	gatggcgcacag	gttcgtgt
O. Avi	ta	cagctg	ctttttaagaaa	ACGTGGGTGGCTCTGAAAAGAGCC	TTAGATCGT	-----	ctgttttaaaagtacgct	..71..	gatggcgcacag	gttcgtgt	
L. Afr	ca	cagcgg	ttttc	gaatgctgtTGTGGGTGGCTCTGAAAAGAGCCTTTG	-----	-----	atgagatggaaccccgagcc	-----	..86..	gatggcgcacag	gttcgtgt
	*	** *		***** **						*** ** *	*** ** *

id=402330 gene=ENSG00000227193 name=RP11-439A17.4 segment=chr1\_120905007\_120905153\_-1 type=EN

H. Sap	-tctgacag	c---atgcctgaacc...376..	gcttaggt--gctttaaactc	-----	AAAGGc	TCTTTTCAGAGCCACT	--caagtctcacataaa	gagcttta		
R. Mac	-tctgacaa	t---atgcctgagcc...376..	gcttaggc--actttagaactc	-----	AAAGGCTCTTTTCAGAGCCACT	-----	caagtctcacataaa	gagcttta		
P. Tro	-tctgacag	c---atgcctgagcc...376..	gcttaggt--gctttaaactc	-----	AAAGGc	TCTTTTCAGAGCCACT	--caactctcacataaa	gagcttta		
P. Abe	-tttgacag	c---atgcctgagcc...374..	gttaggt--agtttaaactc	-----	AAAGGCTCTTTTCAGAGCCACT	-----	caagcctcacataaa	gagcttta		
C. Jac	-tctgacaa	c---atgcctgagcc...376..	gcataggc--actttcaaacc	-----	AAAGGCTCTTTTCAGAGCCACT	-----	caaatatcaaatatg	gagcttta		
M. Mus	-gtttctac	c---atgcctgagcc...373..	-----	catttaactcactcctaa	-----	CCCAAAGGCTCTTTTCAGAGCCACC	cataactgtcactttaa	gtgctttg		
R. Nor	-agtcttaa	c---atgcctgaaac...365..	agtgagttcctcctaactcac	-----	TCCTAA	ccCAAAGGCTCTTTTCAGAGCCACTTAC	actttcagtcataaa	agtctgt-		
C. Por	-gtgttctg	t---atgcctgagcc...376..	ctggctgctgctataacc	-----	AAAGGCTCTTTTCAGAGCC	cctcatttttcaaaaa	gaattgta			
C. Fam	-ttcgtcat	cgagatgccga	-----	agcgtctcctt-cccaa-cccc	-----	AAAGGCTCTTTTCAGAGCCACTCCAT	--tctcaccgaag	gagttgta		
F. Cat	gttagcagt	tgagatgccag	-----	..390..	-----	GGCTCTTTTCAGAGCCACTTCA	-attctcatctaaa	gagttgtc		
B. Tau	-attataga	c---atgcctgaaac...600..	agcagcagcagcagcagcgg	-----	CTGTAA	ACCAAAGGCTCTTTTCAGAGCCACTTAC	-attttcacttaag	gagttgta		
E. Cab	-tttgttga	t---atgcctgaaac...376..	tttagacc--accgttaaacc	-----	AAAGGCTCTTTTCAGAGCCACTT	a	aattgtcatctaaa	gagtttga		
S. Sus	-tctgttaa	a---atgcctgaaac...376..	ttaaagcc--accgtcaaacc	-----	AAAGGCTCTTTTCAGAGCCACTT	a	CATTTT	caTTTAAAG	AGC	-tgtg
O. Avi	-ttattcgt	c---atgcctgaaac...368..	aa	-----	actgtgagtcgg--ttgcaa	ACGAT	tCTAAcGGCTCTTTT	aGAGCCACCCATGT	-cctcagagaaa	gagctgat
L. Afr	-gtttccgt	c---atgcctgagcc...376..	ctcctgcttaccgtcaacc	-----	CCCAAAGGCTCTTTTCAGAGCCACTTATG	-----	ttgtcttctaaa	gagttgca		
		***** *		*		***** **		*		

id=172135 gene=ENSG00000187990 name=HIST1H2BG segment=chr6\_26216428\_26216872\_-1 type=EC

Figure 10: CS=11.7



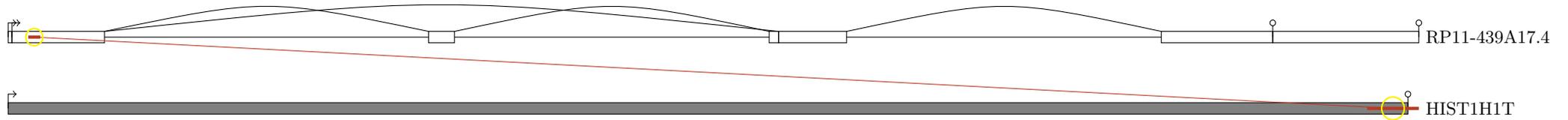
H. Sap	ta	cagctg	ctctt-gatgaaacggca	GTGGCTCTgAAAAGA	-----	tcttttagatcgaccactta	-----	..82..	gatggcgcacag	gttcgtgt
R. Mac	ta	cagctg	ctctt-gatgaaacggca	GTGGCTCTGAAaAGAGCC	-----	tttagatcgaccacttaaaa	-----	..79..	gatggcgcacag	gttcgtgt
P. Tro	ta	cagctg	ctctt-gatgaaacggca	GTGGCTCTgAAAAGA	-----	acctttaggtcgaccactta	-----	..82..	gatggcgcacag	gttcgtgt
P. Abe	ta	cagctg	ctctt-gatgaaacggca	GTGGCTCTGAAaAGAGCC	-----	tttagatcgaccacttaaaa	-----	..79..	gatggcgcacag	gttcgtgt
M. Mus	ca	cagcta	ctttc-atcgacaacgta	GGTGGCTCTGAAAAGAGCC	-----	tttgtgggggatggaa	---ggga---	..82..	gatggcgcacag	gttgggtgt
R. Nor	ca	cagcta	ctctt-attgataac	GTAGGTGGCTCTGAAAAGAGCC	-----	tttgt-tgggatgaac	---cagag---	..77..	gatggcgcacag	gttgggtgt
C. Por	ta	cagctg	ctctt-ttggaa-	ACGTAGGTGGCTCTGAAaAGAGCC	-----	ttaaggtgaatttagtgta	-----	..76..	gatggcgcacag	gttgggtgt
O. Cun	ta	cagctg	ctctc-agcgacaac	GTGGGTGGCTCTGAAaAGAGCC	-----	tttaggttgactgctataga	-----	..80..	gatggcgcacag	gttcgtgt
C. Fam	ta	cagctg	ctcct-cgtgaaacatg	GGTGGCTCTGAAaAGAGCC	-----	tttaggtggccttctgataa	-----	..81..	gatggcgcacag	gttgggtgt
F. Cat	ca	cagcta	ctcct-cgtgaaacatg	GGTGGCTCTGAAaAGAGCCGTT	-----	aggtggtccacttaaaagca	..78..	gatagcgcacag	gttcgtgt	
B. Tau	ca	cagctt	ctttcaagtgtagctctg	GGTGGCTCTGAAaAGAGCC	TTGgaTTTGaTGGAa	cctcgagcacagcgcacact	-----	..74..	gatggcgcacag	gttcgtgt
E. Cab	ca	cagctg	ctttt-catgcaaacatg	GGTGGCTCTAAAaAGAGCC	-----	tttagatcgctgcttaata	-----	..82..	gatggcgcacag	gttgggtgt
S. Sus	ta	caactg	ctcct-tttGAAAAGGTga	GTGGCTCTGAAaAGAGCC	-----	ttaagatagctctacgtaaa	-----	..83..	gatggcgcacag	gttcgtgt
O. Avi	ta	cagctg	ctttt-taagaaaactg	GGTGGCTCTGAAaAGAGCC	-----	tttagatcgctgctgttttaa	-----	..81..	gatggcgcacag	gttcgtgt
L. Afr	ca	cagccg	ttttcgaatgctgt	TGTGGGTGGCTCTGAAaAGAGCC	TTGG	atgagatggaaccccgagcc	-----	..86..	gatggcgcacag	gttcgtgt
			*** *	* * ***** *					*** ** *****	*** ****

id=402330 gene=ENSG00000227193 name=RP11-439A17.4 segment=chr1\_120905007\_120905153\_-1 type=EN

H. Sap	cctataaa	taggc-tgcggtg	..731..	-----	tcttctagt--aacccaacggc	-----	TCTTTT	aAGGCCAC	----	cta	cgatttc	
R. Mac	cctataaa	tacgc-tgagtcg	..727..	-----	gaaacttctact--aacccaac	-----	GGCTCTTTTA	aGAGCCAC	----	cta	cacacttc	
P. Tro	cctataaa	taggc-tgcggtg	..731..	-----	tcttctagt--aacccaacggc	-----	TCTTTT	aAGGCCAC	----	cta	cgatttc	
P. Abe	cctataaa	taggc-tgcggtg	..728..	-----	acttcttctagt--aacccaac	-----	GGCTCTTTTA	aGAGCCAC	----	cta	cgatttc	
M. Mus	tctataaa	tactc-cgtgcag	..719..	-----	tcttctataaat--aacccaac	-----	GGCTCTTTTCAGAGCCACC	-----	aa	cataactc		
R. Nor	tctataaa	tacgc-cgcgagg	..716..	-----	gcttcttcaggt--aacccaac	-----	GGCTCTTTTCAGAGCCACCTAC	atTACGT	at	c-----	tc	
C. Por	tctataaa	tagcc-gtcgcag	..724..	-----	gatccttccggt--aacccaac	-----	GGCTCTTTTA	aGAGCCACC	atTACGT	---	agttc	
O. Cun	cctataaa	tacgc-ggtgcgc	..740..	-----	gctgcttccaggt--aacccaac	-----	GGCTCTTTTA	aGAGCCACC	CCAC	---	ctctc	
C. Fam	cctataaa	tacgc-cgctcgg	..729..	-----	ttga---cttccaat--aacccaac	-----	GGCTCTTTTA	aGAGCCACC	---	aa	catacttc	
F. Cat	cctataaa	tacgc-ggcgccc	..722..	-----	gaagcttctccaat--aaccc-	-----	AACGGCTCTTTTA	aGAGCCACC	---	aa	cctacttc	
B. Tau	cctataaa	tat-cgcgcgctg	..722..	-----	gagttccggttgaagctgc	TTCCAaTAAACCAA	cGGCTCTTTTA	aGAGCCACC	---	aa	cttatttc	
E. Cab	cctataaa	tatgctcgcgcc	..736..	-----	gtttcttccaggt--aacccaac	-----	GGCTCTTTTA	aGAGCCACC	---	aa	catatttc	
S. Sus	cctataaa	tac-cgcgcgctc	..733..	-----	ggaatcttccaggt--aacccaac	-----	GGCTCTTTTA	aGAGCCACC	caACTT	aTT	---	tc
O. Avi	cctataaa	tat-cgcgcgctg	..737..	-----	gctgcttccaat--aacccaac	-----	GGCTCTTTTA	aGAGCCACC	---	aa	cttatttc	
L. Afr	cctataaa	tacgc-ggctctc	..716..	ggttgaagcttctt	caat--aa	-----	CCAAA	cGGCTCTTTTA	aGAGCCACC	TACA	---	tatttc
		*****	** *		* *		***** *****			*		

id=22047 gene=ENSG00000124610 name=HIST1H1A segment=chr6\_26017260\_26018040\_-1 type=EC

Figure 11: CS=13.5



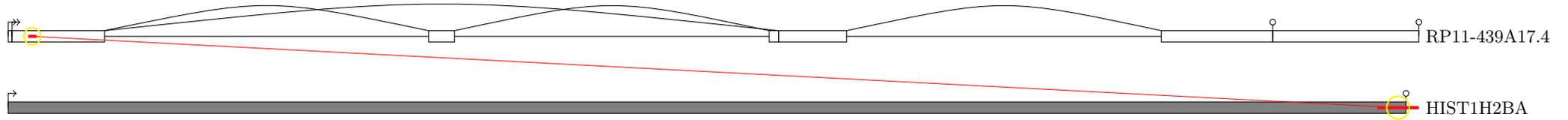
H. Sap	ta	cagctg	ctcttgatgaaaacggca	---	GTGGCTCTgAAAAGATCCTTT	-----	agatcgaccactt	--	aaaaata...76...	gatggcgcacag	gttcgtgt
R. Mac	ta	cagctg	ctcttgatgaaaacggca	---	GTGGCTCTGAAAGAGCCTTT	-----	agatcgaccactt	--	aaaaata...76...	gatggcgcacag	gttcgtgt
P. Tro	ta	cagctg	ctcttgatgaaaacggca	---	GTGGCTCTGAAAAGAGCCTTT	-----	aggtcgaccactt	--	aaaaata...76...	gatggcgcacag	gttcgtgt
P. Abe	ta	cagctg	ctcttgatgaaaacggca	---	GTGGCTCTGAAAGAGCCTTT	-----	agatcgaccactt	--	aaaaata...76...	gatggcgcacag	gttcgtgt
C. Jac	ta	cagctg	ctcttgatgaaaacggaa	---	GTGGCTCTAAAAGAGCCTTT	-----	agatccaccactt	--	aaacacg...75...	gatggcgcacag	gttcgtgt
M. Mus	ca	cagcta	ctttcatcgacaac	---	GTAGGTGGCTCTGAAAGAGCCTTgTGGG	-----	ggatggaaggaa	--	acagggc...74...	gatggcgcacag	gttggtgt
R. Nor	ca	cagcta	ctcttattgataac	---	GTAGGTGGCTCTGAAAGAGCCTTgtTGGG	-----	atgaaccagagatagcttag	-----	...68...	gatggcgcacag	gttggtgt
C. Por	ta	cagctg	ctcttt-tggaacgta	---	GGTGGCTCTGAAAAGAGCCTTT	-----	aaagtgatgatttagt	--	gtatga...73...	gatggcgcacag	gttggtgt
O. Cun	ta	cagctg	ctctcag	---	CGACaaCGTGGGTGGCTCTGAAAGAGCCTTTaGGTT	-----	gactgctatagac	--	acgcgc...72...	gatggcgcacag	gttcgtgt
C. Fam	ta	cagctg	ctcctcgtgaaatcat	---	GGTGGCTCTGAAAGAGCCTTT	-----	aggtggccttctg	--	ataaac...78...	gatggcgcacag	gttggtgt
F. Cat	ca	cagcta	ctcctcgtgaaacat	---	GGTGGCTCTGAAAGAGCC	-----	gtaggtggccactt	--	aaaa...81...	gatagcgcacag	gttcgtgt
E. Cab	ca	cagctg	cttttcatgcaaaca	---	TGGTGGCTCTAAAAGAGCCTTT	-----	agatcgctgctt	--	aataaac...79...	gatggcgcacag	gttggtgt
S. Sus	ta	caactg	ctccttttgaagtgta	---	GTGGCTCTGAAAGAGCCTTT	-----	aaatagcttacgt	--	aaaaaa...80...	gatggcgcacag	gttcgtgt
L. Afr	ca	cagccg	tttt--cgaatgcTGTtTGGGTGGCTCTGAAAGAGCCTTT	---	GG	-----	atgagatggaaccccgagcc	...	86...	gatggcgcacag	gttcgtgt
	*	** *	*		***** **		*		*** **	****	*** **

id=402330 gene=ENSG00000227193 name=RP11-439A17.4 segment=chr1\_120905007\_120905153\_-1 type=EN

H. Sap	gggtgttt	ca-tgcttttcgc	---	669...	-----	ggccaatttgaaagaacc	AAAGGcTCTTTTaaAGGCCAC	-----	cca	cattattt
R. Mac	cggcgctt	ta-cgcttttcgc	---	672...	-----	ggccgatttcgaaagaacc	AAAGGCTCTTTTaaGAGCCAC	-----	cca	cattattt
P. Tro	gggtgttt	ta-tgcttttcgc	---	675...	-----	ggccaatttgaaagaacc	AAAGGcTCTTTTaaAGGCCAC	-----	cca	cattattt
P. Abe	tggcgctt	ta-tgcttttcgc	---	672...	-----	ggccgatttcgaaagaacc	AAAGGCTCTTTTaaGAGCCAC	-----	cca	cattattt
C. Jac	tagcgctt	ta-cgcttttcgc	---	672...	-----	agccgatttgaaagaacc	AAAGGCTCTTTTaaGAGCCAC	-----	cca	cattattt
M. Mus	cactacc	catcactgttg	---	680...	-----	tcaaagccagttttcaaaa	CCCAAAGGCTCTTTTaaGAGCCACTTAC	-----	atacttc	atacttc
R. Nor	ctctactc	cagcgctgttcg	---	683...	-----	tcaaagccagttttcaaaa	CCCAAAGGCTCTTTTaaGAGCCACTTAC	-----	atacttc	atacttc
C. Por	--cagtc	ctctgcttcgg	---	705...	-----	ctgctagtccaccaacc	AAAGGCTCTTTTCAGGCCACC	-----	ca	cacttttc
O. Cun	--gcgagc	ttc--ctaccggtatt	...	666...	-----	ccgcccggccagtttcagag	AACCcAAAGGCTCTTTTaaGAGCCACCcCGTGGTCg	---	ca	agtgctt
C. Fam	agacgttt	ca-cgcttttcaa	---	675...	-----	caagtcacctcaacgaacc	AAAGGCTCTTTTaaGAGCCACTC	-----	ca	aatactt
F. Cat	tccccctc	caccctacccc	---	697...	-----	tgattctcaaagaacccaaa	GGCTCTTTTaaGAGCCACCC	-----	ca	aatactt
E. Cab	aggctttt	ta-cgccaactcgc	---	681...	-----	agaccaatctcggagaacc	AAAGGCTCTTTTaaGAGCCACCTA	-----	aca	aatgatct
S. Sus	cggcattt	ta-cgctttctgt	---	682...	-----	gaccagttttcgtagaacc	AAAGGCTCTTTTaaGAGCCAC	-----	aca	aatggtct
L. Afr	ctcgcttt	ca-cgctttctcac	---	668...	---	gagactcgttttcaaagaac	CCCAAAGGCTCTTTTaaGAGCCACCCAAATA	---	---	tttc
		*				*	*****			

id=280190 gene=ENSG00000187475 name=HIST1H1T segment=chr6\_26107640\_26108364\_-1 type=EC

Figure 12: CS=16.1



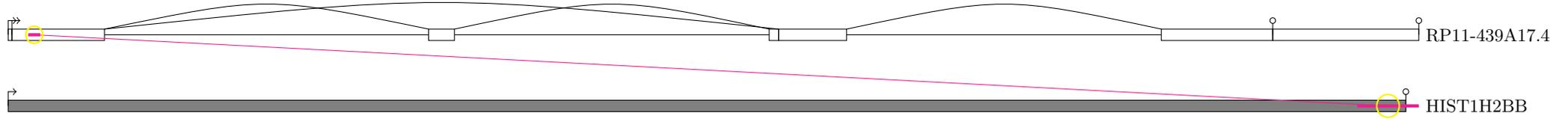
H. Sap	ta	cagctg	ctctt-gatgaaaacggc	AGTGGCTCTGAAAAGATCCTTT	-----	agatcgacca--cttaaaaata...76...	gatggcgcacag	gttcgtgt	
P. Tro	ta	cagctg	ctctt-gatgaaaacggc	AGTGGCTCTGAAAAGAACTTT	-----	aggtcgacca--cttaaaaata...76...	gatggcgcacag	gttcgtgt	
P. Abe	ta	cagctg	ctctt-gatgaaaacggc	AGTGGCTCTGAAAAGAGCCTTT	-----	agatcgacca--cttaaaaata...76...	gatggcgcacag	gttcgtgt	
M. Mus	ca	cagcta	ctttc-atcgacaacgta	GGTGGCTCTGAAAAGAGCCTT	tgTGGG	-----	ggatggaagggaac-agggc...74...	gatggcgcacag	gttggtgt
R. Nor	ca	cagcta	ctctt-attgataacgta	GGTGGCTCTGAAAAGAGCCTT	gtTGGG	atgaaccagagatagctta--g-----	...68...	gatggcgcacag	gttggtgt
O. Cun	ta	cagctg	ctctc-agcgacaacgtgg	GTTGGCTCTGAAAAGAGCCTTT	-----	aggttgactg--ctatagacac...77...	gatggcgcacag	gttcgtgt	
C. Fam	ta	cagctg	ctcct-cgtGAAATca	TGGGTGGCTCTGAAAAGAGCCTTT	-----	aggtggcctt--ctgataaac...78...	gatggcgcacag	gttggtgt	
F. Cat	ca	cagcta	ctcct-cgtgaaaacat	GGGTGGCTCTGAAAAGAGCC	-----	gtaggtggcca--cttaaaa...81...	gatagcgcacag	gttcgtgt	
B. Tau	ca	cagctt	ctttcaagtgtagctg	TGGGTGGCTCTGAAAAGAGCCTTTGG	-----	atttgatggaacctcgagca...85...	gatggcgcacag	gttcgtgt	
E. Cab	ca	cagctg	ctttt-catgcaaca	TGGGTGGCTCTAAAAGAGCCTTT	-----	agatcgctg--cttaataaac...79...	gatggcgcacag	gttggtgt	
S. Sus	ta	caactg	ctcct-tttgaaa	AGTGAGTGGCTCTGAAAAGAGCCTTT	-----	aagatagtcta--cgtaaaaaa...80...	gatggcacacag	gttcgtgt	
O. Avi	ta	cagctg	ctttt-taagaaaacg	TGGGTGGCTCTGAAAAGAGCCTT	-----	tagatcgtctgtttttaa...79...	gatggcgcacag	gttcgtgt	
L. Afr	ca	cagccg	ttttcgaatgctgt	TGTGGGTGGCTCTGAAAAGAGCCTTTGG	-----	atgatggaaccccgagcc...86...	gatggcgcacag	gttcgtgt	
			*** **	***** **		*	*** ** *****	*** **	

id=402330 gene=ENSG00000227193 name=RP11-439A17.4 segment=chr1\_120905007\_120905153\_-1 type=EN

H. Sap	tggtagct	atgccggaggtg...381...	-----	gtaaacgtcatttctaacc	-----	AAAGGcTCTTTTCAGAGCCACT	-----	ta	aacatact----
P. Tro	tggtagct	atgccggaggtg...381...	-----	gtaaacgtcatttctaacc	-----	AAAGGcTCTTTTCAGAGCCACT	-----	ta	aacatact----
P. Abe	tggtagct	atgccagagttg...381...	-----	gtaaacgtcatttctaacc	-----	AAAGGCTCTTTTCAGAGCCACT	-----	ta	aacatact----
M. Mus	tttctacc	atgcccgagcct...372...	-----	catttaactcacactccta	CCCAAAGGCTCTTTTCAGAGCCACC	-----	-----	ta	catactgtca
R. Nor	tttccacg	atgccggaggtg...373...	-----	cccacagagctcacacaga	CCCAAAGGCTCTTTTCAGAGCCACC	-----	-----	ta	cacatctcct
O. Cun	atattgatt	aggctcaagatt...333...	-----	cccaataagttcat	gccc	AAAGGTTCTTTTCAGAGCCAC	-----	ta	atgacttcct
C. Fam	aatcagtg	atgccggagctg...386...	-----	ccagacaagcgttataacc	-----	AAAGGTTCTTTTAAGAGCCACCCA	cATTTT	-----	cc
F. Cat	cagttgag	atgccagagccc...385...	-----	tc---tggttaaccaaccccaaa	-----	GGCTCTTTTCAGAGCCACTT	-----	ta	caattctca
B. Tau	cactagcc	atgccggagttg...381...	-----	aaataatca--cttttcaacaac	-----	CCAAAGGCTCTTTTCAGAGCCACCTA	-----	ta	atacactt--
E. Cab	taccgatc	atgccggagtta...384...	-----	agcgtctgcacatttaacc	-----	AAAGGCTCTTTTCAGAGCCACCTA	-----	ta	atttctcc-
S. Sus	cactaacc	atgccggagctg...387...	gttttcca	cttaataacc	-----	AAAGGCTCTTTTAAGAGCCACTCa	ATTTct	ga	ga
O. Avi	tactagcc	atgccggaggtg...386...	-----	ccaggttttttaacaacccc	-----	AAGGCTCTTTTCAGAGCCACTTA	-----	ta	acacact---
L. Afr	cgtagcc	atgccggaggtg...365...	-----	caagtaaatgcacatgaac	-----	CCAAAGGCTCTTTTCAGAGCCACCTACA	-----	ta	tttctcct
		*** **		*		** *****			

id=601239 gene=ENSG00000146047 name=HIST1H2BA segment=chr6\_25727137\_25727573\_1 type=EC

Figure 13: CS=15.6



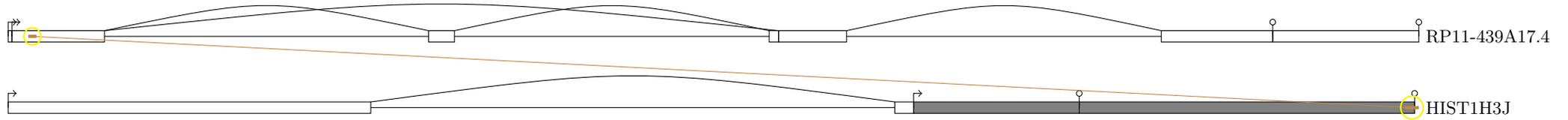
H. Sap	ta	cagctg	ctcttgatgaaaacggca	-----	<b>GTGGCTCTGAAAAGa</b>	<b>CCTTT</b>	-----	agatcgaccacttaaaaata	-----	..76..	gatggcgcacag	gttcgtgt			
R. Mac	ta	cagctg	ctcttgatgaaaacggca	-----	<b>GTGGCTCTGAAAAGAGCCTTT</b>		-----	agatcgaccacttaaaaata	-----	..76..	gatggcgcacag	gttcgtgt			
P. Tro	ta	cagctg	ctcttgatgaaaacggca	-----	<b>GTGGCTCTGAAAAGa</b>	<b>CCTTT</b>	-----	aggtcgaccacttaaaaata	-----	..76..	gatggcgcacag	gttcgtgt			
P. Abe	ta	cagctg	ctcttgatgaaaacggca	-----	<b>GTGGCTCTGAAAAGAGCCTTT</b>		-----	agatcgaccacttaaaaata	-----	..76..	gatggcgcacag	gttcgtgt			
C. Jac	ta	cagctg	ctcttgatgaaaacggaa	-----	<b>GTGGCTCTAAAAa</b>	<b>GAGCCTTT</b>	-----	agatccaccacttaaacacg	-----	..75..	gatggcgcacag	gttcgtgt			
M. Mus	ca	cagcta	ctttcatcgacaac-gta	-----	<b>GGTGGCTCTGAAAa</b>	<b>AGAGCCTT</b>	<b>gTGGG</b>	-----	ggatggaagggaacagggc	..74..	gatggcgcacag	gttggtgt			
R. Nor	ca	cagcta	ctcttattgataac-gta	-----	<b>GGTGGCTCTGAAAAGAGCCTTT</b>	<b>gTGGG</b>	-----	atgaaccagagatagctta-g	..68..	gatggcgcacag	gttggtgt				
C. Por	ta	cagctg	ctcttt-tggaaac-gta	-----	<b>GGTGGCTCTGAAAAGAGCCTTT</b>		-----	aaggtgaatttagtgtatga	..73..	gatggcgcacag	gttggtgt				
O. Cun	ta	cagctg	ctctcagcgacaac-gtg	-----	<b>GGTGGCTCTGAAAAGAGCCTTT</b>		-----	aggttgactgctatagacac	..77..	gatggcgcacag	gttcgtgt				
C. Fam	ta	cagctg	ctcctcgtgaaatc-a	-----	<b>TGGGTGGCTCTGAAAAGAGCCTTT</b>		-----	aggtggccttctgataaac	..78..	gatggcgcacag	gttggtgt				
F. Cat	ca	cagcta	ctcctcgtgaaac-a	-----	<b>TGGGTGGCTCTGAAAAGAGCC</b>		-----	gtaggtggtccacttaaaa	..81..	gatagcgcacag	gttcgtgt				
B. Tau	ca	cagctt	ctttc-----aagt	<b>GTAGTc</b>	<b>GTGGGTGGCTCTGAAAAGAGCCTTT</b>	<b>TGGATT</b>	<b>tGATG</b>	-----	gaacctcgagcacagcgca-c	..77..	gatggcgcacag	gttcgtgt			
E. Cab	ca	cagctg	cttttcatgcgaaaca	-----	<b>TGGGTGGCTCTAAAAa</b>	<b>GAGCCTTT</b>	-----	agatcgctgcttaataaac	..79..	gatggcgcacag	gttggtgt				
S. Sus	ta	caactg	ctccttttgaa-----	<b>AAGGTG</b>	<b>GTGGCTCTGAAAAGAGCCTTT</b>	<b>aAGATA</b>	-----	gtctacgtaaaaaaaatg	..74..	gatggcacacag	gttcgtgt				
O. Avi	ta	cagctg	ctttttaagaaa-----	<b>ACGTGGGTGGCTCTGAAAa</b>	<b>AGAGCCT</b>	<b>TTAGATCGT</b>	-----	ctgttttaaaagtacgcct	..71..	gatggcgcacag	gttcgtgt				
L. Afr	ca	cagccg	ttttc--gaatgctgtt--	-----	<b>GTGGGTGGCTCTGAAAAGAGCCTTT</b>	<b>TGGATGAGAT</b>	<b>tGGAACC</b>	<b>ccgagccgagtgacagtgt</b>	-a..73..	gatggcgcacag	gttcgtgt				
					*****	*****					***	**	*****	***	****

id=402330 gene=ENSG00000227193 name=RP11-439A17.4 segment=chr1\_120905007\_120905153\_-1 type=EN

H. Sap	gaatagca	atgcctgaacc	...375..	atg-----	taagca	---cttcca	aaacc-----	-----	<b>AAAGGc</b>	<b>TCTTTTCAGAGCCAC</b>	cta	cttgtca			
R. Mac	gaatagcg	atgcctgaacc	...375..	atg-----	taagca	---cctcca	aaacc-----	-----	<b>AAAGGCTCTTTTCAGAGCCAC</b>	cta	cttgtcg				
P. Tro	gaatagca	atgcctgaacc	...375..	atg-----	taagca	---cctcca	aaacc-----	-----	<b>AAAGGc</b>	<b>TCTTTTCAGAGCCAC</b>	cta	cttgtca			
P. Abe	gaatagaa	atgcctgaacc	...375..	atg-----	taagca	---cctcca	aaacc-----	-----	<b>AAAGGCTCTTTTCAGAGCCAC</b>	cta	cttgtca				
C. Jac	gaaaagca	atgcccgaacc	...375..	gtg-----	taggca	---cctcca	aatc-----	-----	<b>AAAGGCTCTTTTCAGAGCCAC</b>	cta	cttgtca				
M. Mus	tgaacaga	atgccagagcct	...370..	-----	ctcgta	---gggctc	acaacaaa-----	-----	<b>CCCAAAGGCTCTTTTaa</b>	<b>GAGCCACC</b>	ca	cacttttc			
R. Nor	tgagaaga	atgcctgagcct	...370..	-----	cgctca	---gagctc	acaacaga-----	-----	<b>CCCAAAGGCTCTTTTCAGAGCCACC</b>	ca	catcattt				
C. Por	acaaaaca	atgcctgaaccg	...375..	ctg-----	gctgct	---gcccc	aaacc-----	-----	<b>AAAGGCTCTTTTCAGAGCCACC</b>	ca	ctttatcc				
O. Cun	taaaagca	atgcctgaacc	...381..	-----	gcgccg	ccgcccc	ctcacccc-----	-----	<b>AAAGGCTCTTTTCAGAGCCACC</b>	aa	ctctttca				
C. Fam	aaagaacc	atgcctgagcct	...375..	tcc-----	gaggca	---ccatcca	aaacc-----	-----	<b>AAAGGCTCTTTTCAGAGCCACC</b>	ca	ctctctcc				
F. Cat	aaaaaac	atgcctgagccc	...378..	-----	gaggca	---caatcca	accacaaa-----	-----	<b>GGCTCTTTTCAGAGCCACCCA</b>		ctttatca				
B. Tau	gcaaaaca	atgcctgagcgg	...362..	-----	caatga	---gtgcct	gc-atagg--	<b>CATTt</b>	<b>AAATTC</b>	<b>AAAGGCTCTTTTCAGAGCCACC</b>	<b>CA</b>	<b>ctTTAT</b>	<b>cg</b>		
E. Cab	gaaaaacc	atgcctgaacct	...375..	ctg-----	taggca	---ccat	ttaatcc-----	-----	<b>AAAGGCTCTTTTCAGAGCCACC</b>	ca	ctttttcg				
S. Sus	gacacgccc	atgcctgagcca	...369..	gtgctttc	ataagca	---cttcg	-----	-----	<b>TATTTC</b>	<b>AAAGGCTCTTTTCAGAGCCACC</b>	<b>CA</b>	<b>CTTT</b>	<b>gtca</b>		
O. Avi	tattcgtc	atgcctgaaccg	...367..	-----	aaactgt	---gagtc	ggttgcaa-----	-----	<b>ACGATt</b>	<b>CTAAc</b>	<b>GGCTCTTTTaa</b>	<b>GAGCCACC</b>	<b>CA</b>	<b>TGT</b>	<b>cctca</b>
L. Afr	gaacagtt	atgcctgagccc	...362..	-----	taaatag	acgggc	cctgc-gta	<b>GGTTTTCTTaa</b>	<b>TCAAAGGCTCTTTTCAGAGCCACC</b>	<b>CA</b>	<b>Ctttctcg</b>				
					****	**	**		*****	*****	*	*			

id=533692 gene=ENSG00000196226 name=HIST1H2BB segment=chr6\_26043455\_26043885\_-1 type=EC

Figure 14: CS=9.6



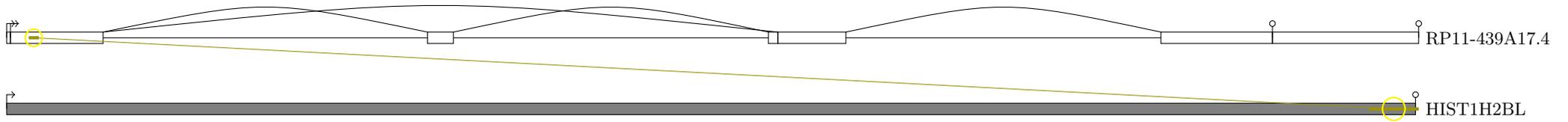
H. Sap	ta	cagctg	ctcttgatgaaaacggc	---	AGTGGCTCTGAAAAGAcCTTTT	-----	agatcgaccacttaaaaata	----	..76..	gatggcgcacag	gttcgtgt	
R. Mac	ta	cagctg	ctcttgatgaaaacggc	---	AGTGGCTCTGAAAAGAGCCTTTAGAT	-----	cgaccacttaaaaatagcc	...	72..	gatggcgcacag	gttcgtgt	
P. Tro	ta	cagctg	ctcttgatgaa	---	AACGgcAGTGGCTCTGAAAAGAcCCTTTAGGT	-----	cgaccacttaaaaatagcc	...	72..	gatggcgcacag	gttcgtgt	
P. Abe	ta	cagctg	ctcttgatgaaaacggc	---	AGTGGCTCTGAAAAGAGCCTTT	-----	agatcgaccacttaaaaata	----	..76..	gatggcgcacag	gttcgtgt	
M. Mus	ca	cagcta	ctttcatcgacaacgta	---	GGTGGCTCTGAAAAGAGCCTTTGtGGGGGATGGAAGGG	-----	aaacaggggcgt	---	taagcgcg	..63..	gatggcgcacag	gttggtgt
R. Nor	ca	cagcta	ctcttattgata	---	ACGTAGGTGGCTCTGAAAAGAGCCTTTgtTGGGAtGAACcaGAGATAGCTTA	-----	ggcgcgctccccgcgatgc	...	49..	gatggcgcacag	gttggtgt	
O. Cun	ta	cagctg	ctctcagcgaca	---	ACGTGgGTGGCTCTGAAAAGAGCCTTT	-----	aggttgactgctatagacac	...	77..	gatggcgcacag	gttcgtgt	
C. Fam	ta	cagctg	ctcctcg	---	TGAAAtcATGGGTGGCTCTGAAAAGAGCCTTT	-----	aggtgcttctgataaac	...	78..	gatggcgcacag	gttggtgt	
F. Cat	ca	cagcta	ctcctcgtgaaa	---	ACATGGGTGGCTCTGAAAAGAGCC	-----	gttagtggtgccacttaaaa	-----	..81..	gatagcgcacag	gttcgtgt	
B. Tau	ca	cagctt	ctttcaagtgtagtc	---	GTGGGTGGCTCTGAAAAGAGCCTTTGG	-----	atttgatg-gaacctcgagca	---	..85..	gatggcgcacag	gttcgtgt	
E. Cab	ca	cagctg	ctttcatgcacaac	---	ATGGGTGGCTCTAAAAGAGCCTTTAG	-----	atgcctgcttaataaacgt	---	..77..	gatggcgcacag	gttggtgt	
S. Sus	ta	caactg	ctcctttgaaaaggt	---	GAGTGGCTCTGAAAAGAGCCTTT	-----	aagatagtctacgtataaaaa	----	..80..	gatggcacacag	gttcgtgt	
L. Afr	ca	cagccg	ttttc	---	gaatgctgtTGTGGGTGGCTCTGAAAAGAGCCTTTGG	-----	atgagatg-gaaccccagacc	----	..86..	gatggcgcacag	gttcgtgt	
			*** *	*	***** **					*** ** *****	*** ** *	

id=402330 gene=ENSG00000227193 name=RP11-439A17.4 segment=chr1\_120905007\_120905153\_-1 type=EN

H. Sap	gagatccg	cggttatcagaa	..264..	-----	ttaattgcttccaagcttc	-----	AAAGGcTC-TTTTCAGAGCCACT	----	t-a	cattctca	
R. Mac	gagatccg	cggttatcagaa	..250..	---	ctagcttgggttctcactt	-----	GTTTccAAAGGCTC-TTTTCAGAGCCACT	----	t-a	ctttctca	
P. Tro	gagatccg	cggttatcagaa	..258..	---	ggtttcttactgtcttccaa	-----	GCTTccAAAGGcTC-TTTTCAGAGCCACT	taCGTT	---	ctca	
P. Abe	gagatccg	cggttatcagaa	..264..	---	ctacttgctcccaagcttc	-----	AAAGGCTC-TTTTCAGAGCCACT	----	taa	cgttctca	
M. Mus	gagatccg	gcgctaccagaa	..227..	---	gggagagggttaaagttcgTCTTTCTGTgTTTTTCAAAGGCTC-TTTTCAGAGCCACC	----	ca	aacctaca			
R. Nor	gagatcag	gcgctaccaaaa	..218..	g	cattcgaggagagagca	---	TAAGTTGTCTcgtTTTTTCAAAGGCTC-TTTTCAGAGCCACC	taTACGT	ta	ca	
O. Cun	gagatccg	gcgctaccagaa	..253..	---	ccccccccgccacacccc	-----	AAAGGCTC-TTTTCAGAGCCACaCACGT	----	g	cg	
C. Fam	gagatccg	gcgctaccagaa	..248..	---	ttcaaagcttgcctctcc	-----	AAAGGCTC-TTTTCAGAGCCACTT	TCATTTT	C	----	a
F. Cat	gagatccg	cgctaccagaa	..249..	---	gtctgtcactccttccaaa	-----	GGCTC-TTTTCAGAGCCACC	-aCATGT	---	acg	
B. Tau	gagattcg	cggttaccagaa	..257..	---	ttggggcattagcttctc	-----	CCAAAGGCTCTTTTTAAGAGCCACT	CCGT	---	tttca	
E. Cab	gagatccg	cgctaccagaa	..264..	g	gtgagcatttgccttttc	-----	CTAAAGGCTC-TTTTCAGAGCCACT	CCAT	---	tttca	
S. Sus	gagatccg	gcgctaccagaa	..269..	---	tattc-gctttcctctcca	-----	AAAGGCTC-TTTTAAGAGCCACT	---	t	tgttctc-	
L. Afr	gagatcag	gcgctaccagaa	..257..	t	gctagtttttttcccttc	-----	CCAAAGGCTC-TTTTCAGAGCCACT	CACA	---	ctcca	
			**** *	** ** *			***** **	*****			

id=719942 gene=ENSG00000197153 name=HIST1H3J segment=chr6\_27858093\_27858412\_-1 type=EC

Figure 15: CS=11.7



H. Sap	ta	cagctg	ctcttgatgaaaacggc-----	AGTGGCTCTGAAAAGa	tCCTTT	-----	agatcgaccacttaaaaata-----	..76..	gatggcgcacag	gttcgtgt		
R. Mac	ta	cagctg	ctcttgatgaaaacggc-----	AGTGGCTCTGAAAAGAGCCTTT	-----	agatcgaccacttaaaaata-----	..76..	gatggcgcacag	gttcgtgt			
P. Tro	ta	cagctg	ctcttgatgaaaacggc-----	AGTGGCTCTGAAAAGa	CCTTT	-----	agatcgaccacttaaaaata-----	..76..	gatggcgcacag	gttcgtgt		
P. Abe	ta	cagctg	ctcttgatgaaaacggc-----	AGTGGCTCTGAAAAGAGCCTTT	-----	agatcgaccacttaaaaata-----	..76..	gatggcgcacag	gttcgtgt			
C. Jac	ta	cagctg	ctcttgatgaaaacggaagtg-----	GCTCTAAAAa	GAGCCTTT	-----	agatccaccacttaaacacg-----	..75..	gatggcgcacag	gttcgtgt		
M. Mus	ca	cagcta	ctttcatcgacaac-----	GTAGGTGGCTCTGAAAAGAGCCTTT	-----	gTGGG	ggatggaagggaacagggc-----	..74..	gatggcgcacag	gttggtgt		
C. Por	ta	cagctg	ctcttttggaaac-----	GTAGGTGGCTCTGAAAAGAGCCTTT	-----	aaggtgaatttagt	gtatga-----	..73..	gatggcgcacag	gttggtgt		
O. Cun	ta	cagctg	ctctcagcgacaac-----	GTGGGTGGCTCTGAAAAGAGCCTTT	-----	aggttgactgctatagacac-----	..77..	gatggcgcacag	gttcgtgt			
C. Fam	ta	cagctg	ctcctc-----	GTGAAATca	TGGGTGGCTCTGAAAAGAGCCTTT	-----	aggtagccttctgataaac-----	..78..	gatggcgcacag	gttggtgt		
F. Cat	ca	cagcta	ctcctcgtgaaaaca-----	TGGGTGGCTCTGAAAAGAGCC	-----	gtaggtggtccacttaaaa-----	..81..	gatagcgcacag	gttcgtgt			
B. Tau	ca	cagctt	ctttc-----	aagttagtcg	TGGGTGGCTCTGAAAAGAGCCTTT	GGaTTG	-----	atggaacctcgagcacagcg..	80..	gatggcgcacag	gttcgtgt	
E. Cab	ca	cagctg	cttttcatgcaaac-----	TGGGTGGCTCTAAAAa	GAGCCTTT	-----	agatcgctgcttaataaac-----	..79..	gatggcgcacag	gttggtgt		
S. Sus	ta	caactg	ctcctttgaaaagtg-----	GTGGCTCTGAAAAGAGCCTTT	-----	aagatagctctacgtaaaaaa-----	..80..	gatggcgcacag	gttcgtgt			
O. Avi	ta	cagctg	cttttta-----	aGAAACg	TGGGTGGCTCTGAAa	AGAGCCTTTa	GATCG	-----	tctgttttaaaagtacgcc..	72..	gatggcgcacag	gttcgtgt
L. Afr	ca	cagcgg	ttttc-----	gaatgctgtt	GTGGGTGGCTCTGAAAAGAGCCTTTG	-----	gatgagatggaacccgagc-----	..87..	gatggcgcacag	gttcgtgt		
			* * * *	*	***** **				*** ** *****	*** **		

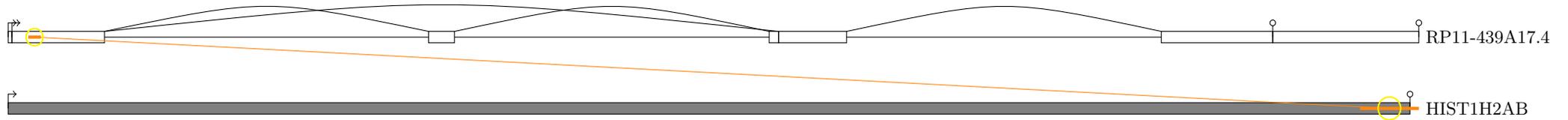
id=402330 gene=ENSG00000227193 name=RP11-439A17.4 segment=chr1\_120905007\_120905153\_-1 type=EN

H. Sap	-----	ttcttggt	ttggttttgcca-..397..	-ctcaagctct--	tgtccaacc-----	AAAGGc	TCTTTTCAGAG	CCACT	-----	c-a	ctattatc--
R. Mac	-----	ttcttggt	ttcttcttacc-..398..	-tcaagctctt--	tgtcaaac-----	AAAGGCTCTTTTCAGAG	CCACT	-----	c-a	ctattatc--	
P. Tro	-----	ttcttggt	ttggttttgcca-..397..	-ctcaagctct--	tgtccaacc-----	AAAGGc	TCTTTTCAGAG	CCACT	-----	c-a	ctattatc--
P. Abe	-----	ttcttggt	ttggttttacc-..399..	-caagctcttctgt	caaac-----	AAAGGCTCTTTTCAGAG	CCACT	-----	caa	ctattatc--	
C. Jac	-----	ttcttggt	ctgctcttgcca-..398..	ctcgagctgc--	tgacaatcc-----	AAAGGCTCTTTTCAGAG	C	-----	aacgca	ccataatc--	
M. Mus	-----	tccgtgct	agagtccagag-..397..	-cctttaac--	tcacactcetaa-----	CCCAAAGGCTCTTTTCAGAG	CCACTAC	-----		--actttca-	
C. Por	-----	agcctg--t	ttgttctccacc-..411..	gctgcctgcac--	tc-cactccc-----	AAAGGCTCTTTTCAGAG	CCATTAC	-----	a	t-atttg--	
O. Cun	-----	accgtgcc	tgcttttccca-..433..	gcgccactacc--	cctcacccc-----	AAAGGCTCTTTTCAGAG	CCACCCAC	-----	a	atatnn----	
C. Fam	ca	cagcacttggt	ttgtct-----	tccgaggcac--	catccaacc-----	AAAGGCTCTTTTCAGAG	CCACTTAATTT	TGCT	t--		
F. Cat	-----	gtacggtt	tcgtttttctg-..431..	-----	ctccagaccatgccccaaa--	GGCTCTTTTCAGAG	CCATCCA	-----		cgctctct--	
B. Tau	-----	ttcctctt	cttcagtgttc-..399..	-aaactgtc--	ttacaggcctcg	TGGAac	CCAAAGGCTCTTTTCAGAG	CCACTCA	-----	a	c-attttc--
E. Cab	-----	ttgtacat	ttaccttgcag-..393..	-atgtaggcac--	tgtcgaac-----	AAAGGCTCTTTTCAGAG	CCACTCA	-----		c-acttcc--	
S. Sus	-----	ttcggctg	ttcattttacat-..405..	-tcgtaggcag--	tgtcaaac-----	AAAGGCTCTTTTCAGAG	CCAC	-----	cta	acctttt--	
O. Avi	-----	tttttact	ttgattggactt-..404..	-aaaagcgcg	ttttcatgtt-----	TGATTc	AAAGGCTCTTTTCAGAG	CCACCCAGTTTTT	ca-		
L. Afr	-----	ttctacct	ttgttctctta-..396..	tgtgtaggcac--	tgtaaaaca-----	CAAAGGCTCTTTTCAGAG	CCACTCAC	-----		---tttcaa	
						***** **					

id=335641 gene=ENSG00000185130 name=HIST1H2BL segment=chr6\_27775257\_27775709\_-1 type=EC

Figure 16: CS=4.5





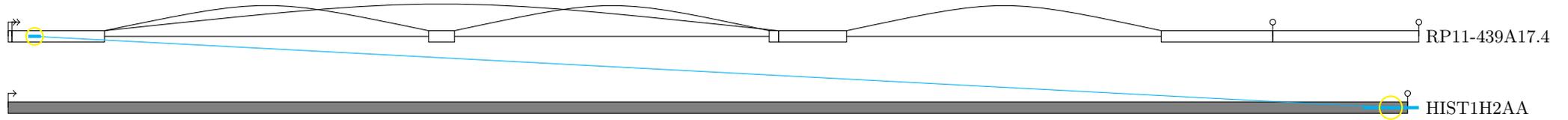
H. Sap	ta	cagctg	ctcttgatgaaaacggca-----	GTGGCTCTGAAAAGAtCCTTT	-----	agatcgaccactt	-----	aaaaata..76..	gatggcgcacag	gttcgtgt
R. Mac	ta	cagctg	ctcttgatgaaaacggca-----	GTGGCTCTGAAAAGAGCCTTT	-----	agatcgaccactt	-----	aaaaata..76..	gatggcgcacag	gttcgtgt
P. Tro	ta	cagctg	ctcttgatgaaaacggca-----	GTGGCTCTGAAAAGaCCTTT	-----	aggtcgaccactt	-----	aaaaata..76..	gatggcgcacag	gttcgtgt
P. Abe	ta	cagctg	ctcttgatgaaaacggca-----	GTGGCTCTGAAAAGAGCCTTT	-----	agatcgaccactt	-----	aaaaata..76..	gatggcgcacag	gttcgtgt
C. Jac	ta	cagctg	ctcttgatgaaaacggaa-----	GTGGCTCTAAAAAGAGCCTTT	-----	agatccaccactt	-----	aaacacg..75..	gatggcgcacag	gttcgtgt
M. Mus	ca	cagcta	ctttcatgcacaacgta-----	GGTGGCTCTGAAAAGAGCCTTT	GGTGGGgatggaagggaac	---ag---	..77..	gatggcgcacag	gttggtgt	
O. Cun	ta	cagctg	ctctcagcgacaac-----	GTGGGTGGCTCTGAAAAGAGCCTTT	AGTTGactgctatagacacgcgcc	-----	..71..	gatggcgcacag	gttcgtgt	
C. Fam	ta	cagctg	ctcctcgt-----	GAAATcaTGGGTGGCTCTGAAAGAGCCTTTAGGT	---ggccttctgataaaacgggg	-----	..74..	gatggcgcacag	gttggtgt	
F. Cat	ca	cagcta	ctcct-----	cgtGAAAcATGGGTGGCTCTGAAAGAGCC	-----	gttagtgggtccactt	-----	aaaa..81..	gatagcgcacag	gttcgtgt
B. Tau	ca	cagctt	ctttcaagtgtagtc-----	GTGGGTGGCTCTGAAAAGAGCCTTTG	---	gatttgatggaacctcgagc	-----	..86..	gatggcgcacag	gttcgtgt
E. Cab	ca	cagctg	cttttcatgc-----	AAAcTGGGTGGCTCTAAAAAGAGCCTTTA	---	gatcgcctgcttaataaacg	-----	..78..	gatggcgcacag	gttggtgt
S. Sus	ta	caactg	ctcctttt-----	GAAAAGGTGaTGGGTCTGAAAAGAGCCTTT	---	aagatagtctacgt	-----	aaaaa..80..	gatggcacacag	gttcgtgt
O. Avi	ta	cagctg	ctttt-----	AAGAAAACGTGGGTGGCTCTGAAAAGAGCCTTTAGAT	---	cgtctgtttttaaagtacg	..74..	gatggcgcacag	gttcgtgt	
L. Afr	ca	cagccg	ttttcgaatgct-----	GTTGTGGGTGGCTCTGAAAAGAGCCTTT	---	ggatgagatggaaccccgag	-----	..88..	gatggcgcacag	gttcgtgt
			*** *	*	***** ***** **			*** ** *****	*** ****	

id=402330 gene=ENSG00000227193 name=RP11-439A17.4 segment=chr1\_120905007\_120905153\_-1 type=EN

H. Sap	aagtagt-t	atgtctggtcgc...420...	---gacaaaatcagcctaacagc-----	AAAGGcTCTTTTCAGAGCCAC	-----	ctac	gacttcca
R. Mac	aactatc-t	atgtctggtcgc...409...	---gacgaaatcagcctaacaac-----	AAAGGCTCTTTTCAGAGCCAC	-----	ctac	gacttccg
P. Tro	aagtagt-t	atgtctggtcgc...420...	---gacgaaatcagcctaacaac-----	AAAGGcTCTTTTCAGAGCCAC	-----	ctac	gacttcca
P. Abe	aggtagt-t	atgtctggtcgc...420...	---gacgaaatcagcctaacaac-----	AAAGGCTCTTTTCAGAGCCAC	-----	ctac	gacttcca
C. Jac	gaaaaac-c	atgtctggtcgc...418...	---ggcgaaatcgtcctaacaac-----	AAAGGCTCTTTTCAGAGCCAC	-----	ctac	gacttccg
M. Mus	-acgcatac	atgtctggagcgc...402...	---ccagttgaaagttaacaaa-----	ACAAAGGCTCTTTTCAGAGCCACC	-----	cac	atctttcc
O. Cun	ctcaagc-g	atgtctggagcgt...398...	---tcccgcctttctgatcaacc	TAACCacAAAGGCTCTTTTCAGAGCCACCCAC	-----		agctttca
C. Fam	ggtttgc-c	atgtcgggagcgc...410...	---taaccaagaagagttaac---	aACCTAAAAAGGCTCTTTTAAGAGCCACCCAcATTTT	-----		---ccc
F. Cat	cactcgc-t	atgtctggagcgc...405...	---tcccaatcccgaaatcaaa-----	GGCTCTTTTAAGAGCCACCCATcTTTT	-----		---tg
B. Tau	tagcagg-t	atgtcaggccgt...419...	---ccaggaaaagtcgatata-----	CAAAGGCTCTTTTCAGAGCCACCCAC	-----		---tcca
E. Cab	cgcttac-t	atgtctgggct...406...	---tttcagttttttcagtcata-----	TAAAGGCTCTTTTCAGAGCCGTCcAGTTT	-----		---tcac
S. Sus	tagcagt-t	atgtctggcctgt...415...	---atcaagaaaaaa-----	AAAGGCTCTTTTCAGAGCCACcCATCTTTT	-----		---ta
O. Avi	tcgctgt-c	atgtctggtcgt...414...	---nnnnnnnnnnnnnnnnnnnn---	ATCTAAAGGCTCTTTTCAGAGCCACCCACGTTTTCT	-----		---ttctg
L. Afr	cggcagt-t	atgtcaggccgt...407...	---tgacgagcaaggaagtaata-----	AAAGGCTCTTTTCAGAGCCACCTACAGT	-----		---ttctg
			**** * *	***** *****			

id=674402 gene=ENSG00000137259 name=HIST1H2AB segment=chr6\_26033320\_26033796\_-1 type=EC

Figure 17: CS=10.92



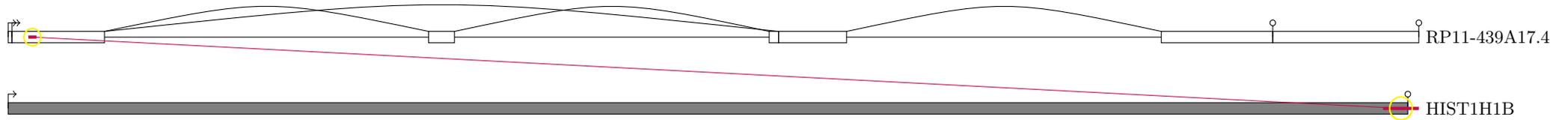
H. Sap	ta	cagctg	ctcttgatgaaaacggca	-----	GTGGCTCTGAAAAGAtCCTTT	-----	agatcgaccactt	-----	aaaaata	...	76	...	gatggcgcacag	gttcgtgt
P. Tro	ta	cagctg	ctcttgatgaaaacggca	-----	GTGGCTCTGAAAAGAcCCTTT	-----	agatcgaccactt	-----	aaaaata	...	76	...	gatggcgcacag	gttcgtgt
P. Abe	ta	cagctg	ctcttgatgaaaacggca	-----	GTGGCTCTGAAAAGAGCCTTT	-----	agatcgaccactt	-----	aaaaata	...	76	...	gatggcgcacag	gttcgtgt
M. Mus	ca	cagcta	ctttcatcgacaacgt	-----	AGGTGGCTCTGAAAAGAGCCTTTGT	-----	gggggatggaa	-----	gggaacag	...	77	...	gatggcgcacag	gttggtgt
C. Por	ta	cagctg	ctctt	---	ttggaacgta	---	GGTGGCTCTGAAAAGAGCCTTT	---	aagtggaatttagt	...	73	...	gatggcgcacag	gttggtgt
O. Cun	ta	cagctg	ctctcagcgacaacg	-----	TGGGTGGCTCTGAAAAGAGCCTTT	-----	aggttgactgctatagacac	-----		...	77	...	gatggcgcacag	gttcgtgt
C. Fam	ta	cagctg	ctcctcgtgaa	-----	ATCATGGGTGGCTCTGAAAAGAGCCTTT	-----	aggtggccttctgataaaac	-----		...	78	...	gatggcgcacag	gttggtgt
F. Cat	ca	cagcta	ctcctcgtga	-----	AAACaTGGGTGGCTCTGAAAAGAGCC	-----	gtaggtggtccactt	-----	aaaa	...	81	...	gatagcgcacag	gttcgtgt
B. Tau	ca	cagctt	ctttcaagtgtagtcg	---	TGGGTGGCTCTGAAAAGAGCCTTTGgaTTT	---	Gatggaacctcgagcacagcg	---		...	80	...	gatggcgcacag	gttcgtgt
E. Cab	ca	cagctg	cttttcat	-----	GCAAcATGGGTGGCTCTAAAAaGAGCCTTT	-----	agatcgcttcttaataaac	-----		...	79	...	gatggcgcacag	gttggtgt
S. Sus	ta	caactg	ctcctttgaaaagg	-----	TGAGTGGCTCTGAAAAGAGCCTTT	-----	aagatagtctacgtaaaaa	-----		...	80	...	gatggcacacag	gttcgtgt
O. Avi	ta	cagctg	cttttta	-----	AGAAAACGTGGGTGGCTCTGAAAAGAGCCTTTAGAT	-----	cgctgttttaaaagtacg	...		...	74	...	gatggcgcacag	gttcgtgt
L. Afr	ca	cagcgg	ttttc	---	gaatgctgTGTGGGTGGCTCTGAAAAGAGCCTTTG	---	atgagatggaaccccgagcc	---		...	86	...	gatggcgcacag	gttcgtgt
					*****								***	***

id=402330 gene=ENSG00000227193 name=RP11-439A17.4 segment=chr1\_120905007\_120905153\_-1 type=EN

H. Sap	ctagaaat	gtggttctcgtg	-----	...444...	---	cttctgtgtcagaaaaaca	-----	AAAGGcTCTTTTCAGAGCCAC	-----	cta	ccgtctca--
P. Tro	ctagaaat	gtggttctcgtg	-----	...448...	---	tctaagtgtcagaaaaaca	-----	AAAGGcTCTTTTCAGAGCCAC	-----	cta	ccgtctca--
P. Abe	ctagaaat	ccgatttttcta	-----	...438...	---	atgacgtgtcacaataaaca	-----	AAAGGCTCTTTTCAGAGCCAC	-----	cta	ccgtctca--
M. Mus	gtggtcat	ggggcctcgtc	-----	...428...	---	acagcaacctcagtttaaa	---	ACAAAAAGGCTCTTTTCAGAGCCACCT	---	t	cattttca--
C. Por	-----	ctattctttttttccttt	...	440...	---	atctatatctcctgaaaaac	-----	AAAGGCTCTTTTCAGAGCCACC	-----	---	cagtttttct
O. Cun	gctgaagc	ttgattcttga	-----	...436...	---	ccgggggatgtgaattgcca	-----	AAAGGCTCTTTTCAGAGCCACTCA	---	---	gagtctca--
C. Fam	tggcggct	gtggtctcccct	-----	...448...	---	acgttgtgagaagaaaaacc	-----	AAAGGCTCTTTTCAGAGCCACCCaa	---	ATGAT	ca-----
F. Cat	tcgttact	ttgggtctgtct	-----	...465...	---	ggggccctgtga	---	GGCTCTTTTCAGAGCCACCCAcg	---	GTTT	ca-----
B. Tau	--ctaacg	gtaacattttccgt	-----	...467...	---	gag	---	TGAAaCCAAGGGCTCTTTTCAGAGCCACTTA	---	---	aaatttct--
E. Cab	-----	cgctttttcagttgcggt	...	420...	---	cgctggtggagtaagaaac	-----	AAAGGCTCTTTTCAGAGCCGCTCAta	---	TTGT	ca-----
S. Sus	--ccagca	gtctattttcccg	-----	...452...	---	tctggtggagaatgcaacc	-----	AAAGGCTCTTTTCAGAGCCACTCA	---	---	aattatca--
O. Avi	cgtggagg	gcgactttgtcg	-----	...465...	---	nnnnnnnnnnnnnnnnnnnn	-----	ATCTAAAGGCTCTTTTCAGAGCCACCCACGTTTT	---	C	-----
L. Afr	----acg	gtaactttgtccgttat	---	466...	---	agcaagagcttaactgaaa	-----	CCAAAGGCTCTTTTCAGAGCCACCCACGGatt	---	---	ca-----
								*****			

id=198954 gene=ENSG00000164508 name=HIST1H2AA segment=chr6\_25726291\_25726790\_-1 type=EC

Figure 18: CS=15.6



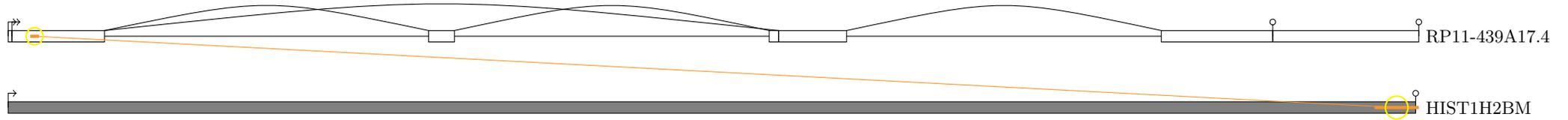
H. Sap	ta	cagctg	ctctt-gatgaaacggca	GTGGCTCTGAAAAGatCCTTT	-----	agatcgaccacttaaaaata	-----	..76..	gatggcgcacag	gttcgtgt	
R. Mac	ta	cagctg	ctctt-gatgaaacggca	GTGGCTCTGAAAAGAGCCTTT	-----	agatcgaccacttaaaaata	-----	..76..	gatggcgcacag	gttcgtgt	
P. Tro	ta	cagctg	ctctt-gatgaaacggca	GTGGCTCTGAAAAGAACTTT	-----	aggtcgaccacttaaaaata	-----	..76..	gatggcgcacag	gttcgtgt	
P. Abe	ta	cagctg	ctctt-gatgaaacggca	GTGGCTCTGAAAAGAGCCTTT	-----	agatcgaccacttaaaaata	-----	..76..	gatggcgcacag	gttcgtgt	
C. Jac	ta	cagctg	ctctt-gatgaaacgg	AAGTGGCTCTAAAAAGAGCCTTT	-----	agatccaccacttaaacacg	-----	..75..	gatggcgcacag	gttcgtgt	
M. Mus	ca	cagcta	ctttc-atcgacaacg	TAGGTGGCTCTGAAAAGAGCCTT	tgTGGG	-----	gatggaagggaacagggcg	-----	..73..	gatggcgcacag	gttggtgt
R. Nor	ca	cagcta	ctctt-attgataaacg	TGGTGGCTCTGAAAAGAGCCTTT	gtTGGG	-----	gatgaaccagagatagcttag	-----	..68..	gatggcgcacag	gttggtgt
O. Cun	ta	cagctg	ctctc-agcgacaacg	TGGTGGCTCTGAAAAGAGCCTTT	aGGTT	-----	gactgctatagacacgcgc	..72..	gatggcgcacag	gttcgtgt	
C. Fam	ta	cagctg	ctcct-cgtGAAATC	TGGTGGCTCTGAAAAGAGCCTTT	-----	aggtggccttctgataaac	-----	..78..	gatggcgcacag	gttggtgt	
F. Cat	ca	cagcta	ctcct-cgtgaaaca	TGGTGGCTCTGAAAAGAGCC	-----	gtaggtggtccacttaaaa	-----	..81..	gatagcgcacag	gttcgtgt	
B. Tau	ca	cagctt	ctttcaagtgtagtcg	TGGTGGCTCTGAAAAGAGCCTTT	GGaTTTG	-----	atggaacctcgagcacagcg	..80..	gatggcgcacag	gttcgtgt	
E. Cab	ca	cagctg	ctttt-catgcaaa	TGGTGGCTCTGAAAAGAGCCTTT	-----	agatcgctgcttaataaac	-----	..79..	gatggcgcacag	gttggtgt	
O. Avi	ta	cagctg	ctttt-taagaaaacg	TGGTGGCTCTGAAAAGAGCCTTT	-----	agatcgctgtttttaaag	-----	..78..	gatggcgcacag	gttcgtgt	
L. Afr	ca	cagccg	ttttcgaatgc	TGTTgTGGTGGCTCTGAAAAGAGCCTTT	GG	-----	atgagatggaaccccgagcc	..86..	gatggcgcacag	gttcgtgt	
	*	****	* * *	***** **					*** *****	*** ****	

id=402330 gene=ENSG00000227193 name=RP11-439A17.4 segment=chr1\_120905007\_120905153\_-1 type=EN

H. Sap	caacg-caa	aacctgctcttt...734...	-----	gaaaaccgcaa-caaagcccc	----	AAAGGC-	TCTTTTCAGAGCCAC	cca	gagacctc
R. Mac	caatg-caa	aacctgctcttt...734...	-----	gaaaaccgcaa-caaagcccc	----	AAAGGC-	TCTTTTCAGAGCCAC	cca	gagatctc
P. Tro	caacg-caa	aacctgctcttt...734...	-----	gaaaaccgcaa-caaagcccc	----	AAAGGC-	TCTTTTCAGAGCCAC	cca	gagatctc
P. Abe	caatg-caa	aacctgctcttt...734...	-----	gaaagccgcaa-caaagcccc	----	AAAGGC-	TCTTTTCAGAGCCAC	cca	gagatctc
C. Jac	caatg-caa	aacctgctcttt...728...	-----	gaaaaccgcaa-ccaagcccc	----	AAAGGC-	TCTTTTCAGAGCCACTT	a	cagatctc
M. Mus	catcg-caa	aatttgctcttc...727...	-tgcttgcgacagcaa-caaag-	-----	CCCCAAAGGC-	TCTTTTCAGAGCCACCTA		gagagctc	
R. Nor	cattg-caa	aatttgctcttc...711...	-gcttgtaacagcag-caaag-	-----	CCCCAAAGGC-	TCTTTTCAGAGCCACC	ca	gagaactc	
O. Cun	-atcgcaa	aacttgctcttc...707...	cgccgtccggccaccgacca-	-----	AGCCccAAAGGC-	TCTTTTCAGAGCCACCCA		gagacctc	
C. Fam	cattg-caa	gacctgctcttt...740...	-----	gaaaagccga-caaagcccc	----	AAAGGC-	TCTTTTCAGAGCCACCCA	GGTTTT	tt
F. Cat	cattg-cac	gacttgctcttt...739...	-----	gaaggcag-caaaaccccaaa-	----	GGC-	TCTTTTCAGAGCCACCCA		gagatttc
B. Tau	cattg-caa	aacttgctcttt...722...	-gaaagttagccttg-agaag	-----	CAAAccCCAAAGGC-	TCTTTTCAGAGCCACCCA		gagatctc	
E. Cab	cattg-caa	aacttgctcttt...733...	-----	tttaggactgacaaacccc	----	AAAGGC-	TCTTTTCAGAGCCACCCA		gaggtctc
O. Avi	ogcc-cga	gtcccgccag...727...	-----	ttcgaagctgcacacaacc	----	AAAGGCT	tCTTTTCAGAGCCACCCA		aaatctc
L. Afr	cattg-caa	aacttgctcttc...724...	-cctggtgaaaaagt-	-----	CCAAAGGC-	TCTTTTCAGAGCCACCCA	AAATA	tctc	
	*		* *			*** *****		*	

id=583172 gene=ENSG00000184357 name=HIST1H1B segment=chr6\_27834570\_27835359\_-1 type=EC

Figure 19: CS=8.4



```

R. Mac  tacagctgctcttgatgaaaacggca----GTGGCTCTGAAAAGAGCCTTT-----agatcgaccacttaaaaata-----..76..gatggcgcacaggttcggtg
P. Abe  tacagctgctcttgatgaaaacggca----GTGGCTCTGAAAAGAGCCTTT-----agatcgaccacttaaaaata-----..76..gatggcgcacaggttcggtg
C. Jac  tacagctgctcttgatgaaaacggaa----GTGGCTCTAAAAAGAGCCTTT-----agatccaccacttaaacacg-----..75..gatggcgcacaggttcggtg
M. Mus  cacagctactttcatcgacaacgta----GGTGGCTCTGAAAAGAGCCTTTGTG-----ggggatggaa---gggaaacagg-----..76..gatggcgcacaggttggtg
R. Nor  cacagctactcttattgataacgtagg----TGGCTCTGAAAAGAGCCTTTGTGGgatgaaccagagatagctta-----..69..gatggcgcacaggttggtg
C. Por  tacagctgctcttt-tgaaaacgta----GGTGGCTCTGAAAAGAGCCTTT-----aaggtgaatttagtgtatga-----..73..gatggcgcacaggttggtg
D. Cun  tacagctgctctcagc-----GACAaCGTGGGTGGCTCTGAAAAGAGCCTTTaGGTTgaCTGC-tatagacacgcgccttaggc-----..66..gatggcgcacaggttcggtg
C. Fam  tacagctgctcctcgtgaaatca----TGGGTGGCTCTGAAAAGAGGCC-----tttaggtggccttctgataa-----..81..gatggcgcacaggttggtg
F. Cat  cacagctactcctcgtgaaaaca----TGGGTGGCTCTGAAAAGAGGCC-----gtaggtggccacttaaaa-----..81..gatagcgcacaggttcggtg
B. Tau  cacagctcttcaagtgtagtc----GTGGGTGGCTCTGAAAAGAGCCTTTGgaTTTG-----atggaacctcgagcacagcg-----..80..gatggcgcacaggttcggtg
E. Cab  cacagctgcttttcatgcaaaca----TGGGTGGCTCTAAAAAGAGCCTTT-----agatcgctgcttaataaac-----..79..gatggcgcacaggttggtg
S. Sus  tacaactgctcctttgaaaaggtaga----GTGGCTCTGAAAAGAGCCTTT-----aagatagctctacgtaaaaaa-----..80..gatggcacacaggttcggtg
D. Avi  tacagctgcttttaagaaa----ACGTGGGTGGCTCTGAAAAGAGCCTTTAGATCGT-----ctgtttttaaagtacgct...71..gatggcgcacaggttcggtg
L. Afr  cacagccgttttcg----aatgctgtTGTGGGTGGCTCTGAAAAGAGCCTTTGG-----atgagatggaaccccgagcc-----..86..gatggcgcacaggttcggtg
*** * *                               ***** *****                               *** ** ***** **

```

id=402330 gene=ENSG00000227193 name=RP11-439A17.4 segment=chr1\_120905007\_120905153\_-1 type=EN

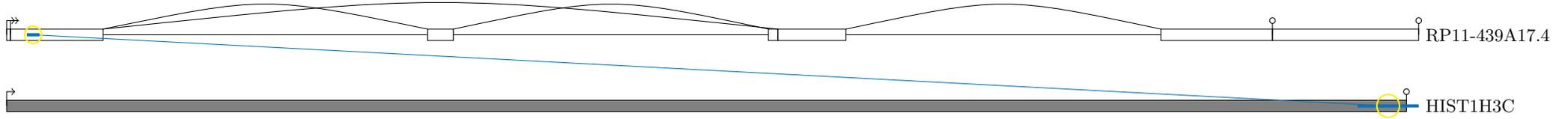
```

R. Mac  ttttcaccatgcctgaacca...390...tccgctctgacct---acactcc-----AAAGGCTCTTTTCAGAGCCGT--ccacgtttcac
P. Abe  ttttcaccatgcctgaacct...390...tctcctgacct---acacctc-----AAAGGCTCTTTTCAGAGCCGT--ccacgtttcaa
C. Jac  atctcatgatgcccagccg...373...ct---cgagctgctgacaatcc-----AAAGGCTCTTTTCAGAGCCGT--ccacgtttctc
M. Mus  gttgtaacatgcctgagcca...370...ttcgtct---gac---tactcctcaaa---CACAAAGGCTCTTTTCAGAGCCACT-aagcagttctt
R. Nor  atctaaaaatgcctgatccg...363...aa---gtgagttccttaactca---CTAAccCAAAGGCTCTTTTCAGAGCCA--agcacattctca
C. Por  tttgcaaatgcctgagccc...388...---gctc---ccc---gcactccaccccc---AAAGGCTCTTTTCAGAGCCACT--cactctctcg
D. Cun  gctgcaaatgcctgacctg...366...ta---ggcgctgctcatcgactcGTGGcgGACCcAAAGGCTCTTTTCAGAGCCACCCAGGTGTC--a
C. Fam  cggtcaccatgcccagccc...402...ac---atagacctatggccaacc-----GGCTTTTTTATAGCCCGTCCAcaacttact--
F. Cat  tcccggccatgcctgagcca...395...---ctccagacct---atgccccaaa-----GGCTCTTTTTATAGCCATCCAcgctctct--
B. Tau  acttcaccatgcctgagcca...367...aa---acgtctttacaggcctcg---TGGAacCCAAAGGCTCTTTTCAGAGCCACCTAC--cttttct
E. Cab  tgttcagaatgcctgagccc...373...at---gtaggcactgtcgaacct-----AAAGGCTCTTTTCAGAGCCACCTA--acattccc
S. Sus  ttctcagcatgcctgagcca...382...---gatcagacttcttaacacc-----AAAGGCTCTTTTCAGAGCCAC--ctatacattt
D. Avi  tattcgtcatgcctgaacg...367...aaactgtgagtcggtgca---a---ACGATtCTAAcGGTCTTTTaaAGGCCACCCATGT--cctca
L. Afr  gtttcacaatgcctgaacca...380...aa---gcgtctttgctcctaacc-----CCAAAGGCTCTTTTaaAGGCCATCCAGC--cttttc
***** ** **                               **** * **

```

id=206666 gene=ENSG00000196374 name=HIST1H2BM segment=chr6\_27782822\_27783267\_1 type=EC

Figure 20: CS=8.4



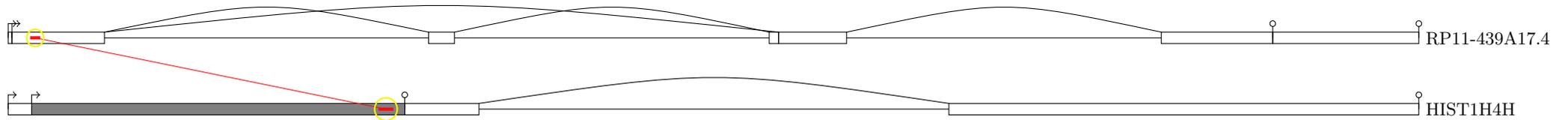
H. Sap	ta	cagctg	ctcttgatgaaaacggc	-----AGTGGCTCTGAAAAGATCCTTT-----	-----agatcgaccacttaaaaata-----	..76..	gatggcgcacag	gttcgtgt
R. Mac	ta	cagctg	ctcttgatgaaaacggc	-----AGTGGCTCTGAAAAGAGCCTTT-----AG-----	-----atcgaccacttaaaaatatg-----	..74..	gatggcgcacag	gttcgtgt
P. Tro	ta	cagctg	ctcttgatgaaaacggc	-----AGTGGCTCTGAAAAGAaCCTTT-----	-----aggtcgaccacttaaaaata-----	..76..	gatggcgcacag	gttcgtgt
P. Abe	ta	cagctg	ctcttgatgaaaacggc	-----AGTGGCTCTGAAAAGAGCCTTT-----AG-----	-----atcgaccacttaaaaatatg-----	..74..	gatggcgcacag	gttcgtgt
C. Jac	ta	cagctg	ctcttgatgaaaacgg	-----AAGTGGCTCTAAAAaGAGCCTTTAG-----	-----atccaccacttaaacacgct-----	..73..	gatggcgcacag	gttcgtgt
M. Mus	ca	cagcta	ctttcatcgacaacg	-----TAGGTGGCTCTGAAAaAGAGCCTTT-----	-----gtgggggatggaagggaac-----	..79..	gatggcgcacag	gttggtgt
R. Nor	ca	cagcta	ctcttattgataacg	-----TAGGTGGCTCTGAAAaAGAGCCTTTGttGGGATGAA-----	-----ccagagatagcttaggcgag-----	..63..	gatggcgcacag	gttggtgt
C. Por	ta	cagctg	ctcttt-tggaaacgta	-----GGTGGCTCTGAAAaAGAGCCTTT-----AAG-----	-----gtgaatttagtgtatgatt-----	..70..	gatggcgcacag	gttggtgt
O. Cun	ta	cagctg	ctctcagcgacaac	-----GTGGTGGCTCTGAAAaAGAGCCTTT-----	-----aggttgactgctatagacac-----	..77..	gatggcgcacag	gttcgtgt
C. Fam	ta	cagctg	ctcctcgtgaaatca	-----TGGGTGGCTCTGAAAaAGAGCCTTT-----	-----aggtggccttcgataaaac-----	..78..	gatggcgcacag	gttggtgt
F. Cat	ca	cagcta	ctcctcgtgaaaaca	-----TGGGTGGCTCTGAAAaAGAGCC-----	-----gtaggtggtccacttaaaa-----	..81..	gatagcgcacag	gttcgtgt
B. Tau	ca	cagctt	ctttcaagtgtatgc	-----GTGGTGGCTCTGAAAaAGAGCCTTT-----	-----ggatttgatggaacctcgag-----	..87..	gatggcgcacag	gttcgtgt
E. Cab	ca	cagctg	cttttcatgcaaaca	-----TGGGTGGCTCTAAAAaGAGCCTTTAG-----	-----atgcctgcttaataaacgt-----	..77..	gatggcgcacag	gttggtgt
S. Sus	ta	caactg	ctcctttgaaaaggta	-----GTGGCTCTGAAAaAGAGCCTTT-----	-----aagatagctctacgtaaaaaa-----	..80..	gatggcacacag	gttcgtgt
O. Avi	ta	cagctg	cttttta-----aGAAAac	-----GTGGTGGCTCTGAAAaAGAGCCTTT-----	-----agatcgctgttttttaaaag-----	..78..	gatggcgcacag	gttcgtgt
L. Afr	ca	cagccg	ttttcgaatgctgt	-----TGTGGGTGGCTCTGAAAaAGAGCCTTTGGATGAGatGGAA-----	-----ccccgagccgagtgacgtgt-----	..75..	gatggcgcacag	gttcgtgt
		*** *	*	***** **			*** ** *	*** ** *

id=402330 gene=ENSG00000227193 name=RP11-439A17.4 segment=chr1\_120905007\_120905153\_-1 type=EN

H. Sap	cattgcaa	atggctcgtacg...403...	-----g-----cccgtttcttctcattga-----	-----AAAGGcTCTTTTCAGAGCCACT-----	caatttca
R. Mac	cattgcag	atggctcgtaca...399...	-----gctcgtcttattgcttctcctaa-----	-----TTGAAAAGGCTCTTTTCAGAGCCACT-----	caatttca
P. Tro	cattgcaa	atggctcgtacg...403...	-----g-----cccgtttcttctcattga-----	-----AAAGGcTCTTTTCAGAGCCACT-----	caatttca
P. Abe	cattgcaa	atggctcgtaca...399...	-----gtcttcccatttctcctataa-----	-----TTGAAAAGGCTCTTTTCAGAGCCACT-----	caatttca
C. Jac	cgttgcaa	atggctcgtacg...399...	-----atctgcccatttacccttaa-----	-----TTGAAAAGGCTCTTTTCAGAGCCACT-----	caatttca
M. Mus	tcccaaga	atggctcgtact...400...	-----ggtttttatgctatttataaa-----	-----AAAGGCTCTTTTAaGAGCCACCTA-----	agatgtca
R. Nor	ctaaagaa	atggctcgtact...392...	-----ggcttaaatgattctattcc-----	-----TTCATTTTCAAAAAGGCTCTTTTAaGAGCCACCTA-----	caatttca
C. Por	tttctgtg	atggctcgtaca...396...	-----ttaagccagtcaagtgcaca-----	-----CTTAAAAGGCTCTTTTAaGAGCCACCcacta-----	caatttca
O. Cun	ggcgcgag	atggctcgtact...405...	-----gtaagcttatcggattccaa-----	-----AAAGGCTCTTTTCAGAGCCACCCAC-----	caatttca
C. Fam	ttcgtctt	atggctcgcacg...396...	-----taaagcaactttagttgaa-----	-----AAAGGCTCTTTTCAGAGCCACCCCA-----	caatttca
F. Cat	tgtttcag	atggctcgcacg...400...	-----gcccgtctctggtgaaaaaa-----	-----GGCTCTTTTCAGAGCCACCCCA-----	caatttca
B. Tau	cacttggt	atggctcgtact...401...	-----ttgttttctctgtactttaa-----	-----AAAGGCTCTTTTcAGAGCCACCCAC-----	caatttca
E. Cab	ctttcgtg	atggctcgtact...398...	-----aagcaagtttttctcctga-----	-----CTGAAAAGGCTCTTTTcAGAGCCACCCCA-----	caatttca
S. Sus	cacttggt	atggctcgtact...404...	-----cttttctttacagtagaaa-----	-----AAAGGCTCTTTTCAGAGCCAC-----	caatttca
O. Avi	catttggt	atggctcgcact...403...	-----nnttctctgtacttataaaa-----	-----AAAGGCTCTTTTcAGAGCCACCCCA-----	caatttca
L. Afr	tctcogtg	atggctcgtacc...389...	-----gagggcgtaaattgccactTTCCcTTTgacTTCAAAAAGGCTCTTTTCAGAGCCACCCACA-----	-----	caatttca
		***** **		***** **	

id=126503 gene=ENSG00000196532 name=HIST1H3C segment=chr6\_26045639\_26046097.1 type=EC

Figure 21: CS=12.48



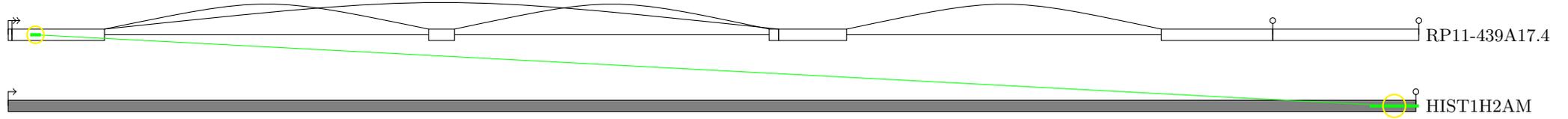
H. Sap	ta	cagctg	ctcttgatgaaaacggca	---GTGGCTCTGAAAAGatCCTTT	----agatcgaccacttaaaaata---	..76..	gatggcgcacag	gttcgtgt
R. Mac	ta	cagctg	ctcttgatgaaaacggca	---GTGGCTCTGAAAAGaGCCTTT	----agatcgaccacttaaaaata---	..76..	gatggcgcacag	gttcgtgt
P. Tro	ta	cagctg	ctcttgatgaaaacggca	---GTGGCTCTGAAAAGaCCTTT	----aggtcgaccacttaaaaata---	..76..	gatggcgcacag	gttcgtgt
P. Abe	ta	cagctg	ctcttgatgaaaacggca	---GTGGCTCTGAAAAGaGCCTTT	----agatcgaccacttaaaaata---	..76..	gatggcgcacag	gttcgtgt
C. Jac	ta	cagctg	ctcttgatgaaaacggaa	---GTGGCTCTaAAAAGaGCCTTT	----agatccaccacttaaacacg---	..75..	gatggcgcacag	gttcgtgt
M. Mus	ca	cagcta	ctttcatcgacaacg-ta	---GGTGGCTCTGAAAAGaGCCTTTG	----tgggggatggaagggaaaca..	..78..	gatggcgcacag	gttggtgt
R. Nor	ca	cagcta	ctcttattgataacg-ta	---GGTGGCTCTGAAAAGaGCCTTTG	---ttgggatgaac--cagagatag---	..73..	gatggcgcacag	gttggtgt
C. Por	ta	cagctg	ctcttt-tggaaac-gta	---GGTGGCTCTGAAAAGaGCCTTT	----aaggtgaatttagttagatga---	..73..	gatggcgcacag	gttggtgt
D. Cun	ta	cagctg	ctctcagcgacaacg	---TGGGTGGCTCTGAAAAGaGCCTTT	----aggttgactgctatagacac---	..77..	gatggcgcacag	gttcgtgt
C. Fam	ta	cagctg	ctcctcgtgaaatca	---TGGGTGGCTCTGAAAAGaGCCTTT	----aggtggccttctgataaaac---	..78..	gatggcgcacag	gttggtgt
B. Tau	ca	cagctt	ctttcaagtgtagtc	---TGGGTGGCTCTGAAAAGaGCCTTTGG	atattgatggaacctcgagca-----	..85..	gatggcgcacag	gttcgtgt
E. Cab	ca	cagctg	cttttcatgcaaaaca	---TGGGTGGCTCTaAAAAGaGCCTTT	----agatcgctgcttaataaac---	..79..	gatggcgcacag	gttggtgt
S. Sus	ta	caactg	ctcctttgaaaaggtga	---GTGGCTCTGAAAAGaGCCTTT	----aagatagctctacgtaaaaaa---	..80..	gatggcgcacag	gttcgtgt
O. Avi	ta	---	CA GCTgcTTTTTaGAAaCGTGGGTGGCTCTGAAAAGaGCCTTT	----agatcgctgtgttttaaaag---	..78..	gatggcgcacag	gttcgtgt	
L. Afr	ca	cagccg	ttttc--gaatgctGTTGTGGGTGGCTCTGAAAAGaGCCTTTGgaTGAGA	tggaaccccgagccgagtg...80..	gatggcgcacag	gttcgtgt	gttcgtgt	

id=402330 gene=ENSG00000227193 name=RP11-439A17.4 segment=chr1\_120905007\_120905153\_-1 type=EN

H. Sap	tttagaag	ttgcttagtc	---at---..328...--tc-ttatttttcattttcaacc-----	AAAGGccCTTTTCAGGGCCGC	--cacttttttca-taaa	agagcaga
R. Mac	tttgggag	ctggttagtc	---at---..329...--ca-gtattttctctttacaacc-----	AAAGGccCTTTTCAGGGCCGC	--cacttttctcg-taaa	agagcgga
P. Tro	tttaggag	ttgcttagtc	---at---..327...--ct-ctatttttcattttcaacc-----	AAAGGccCTTTTCAGGGCCGC	--cacttttttca-taaa	agagcgga
P. Abe	tttgaaag	ctgttttatac	---at---..327...--ct-ctattttttgttttcaatc-----	AAAGGccCTTTTCAGGGCCGC	--cacttttttca-taaa	agagcgga
C. Jac	gttaagag	ctggttagac	---at---..331...--ac-accgcgactccccaaacc-----	AAAGGccCTTTTCAGGGCCGC	--cactttttcgg-taag	agagcgga
M. Mus	ttcagcaa	gtacaccatg	---tc---..314...--ttgcttctgacct-acaaaac-----	CAAAGGccCTTTTCAGGGCCGC	--cacatttttctattaaa	agagcgaa
R. Nor	---ctctc	cagctttgtagat	---..323...--gt-cgtctgatctcacaaaaac-----	CAAAGGccCTTTTCAGGGCCGC	--cacattttcctattaaa	aggcgag
C. Por	ccttctag	tggctctaaa	---at---..319...--gt-ttcctaacaacatcaacc-----	AAAGGccCTTTTCAGGGCCGC	--cacattttcctt-taaa	agagctaa
O. Cun	tttgtag	ctg---atagc	gatg...319...--gc-ggccccagacccccacc-----	AAAGGccCTTTTCAGGGCCACCCA	--agttctcccg-taag	agagctag
C. Fam	ctg----	aacgttg	cagatatgt...319...--gt-cgctttttctaacaacac-----	AAAGGccCTTTTCAGGGCCGCCA	cttggtgtctc--gaa	agagctgc
B. Tau	tctcttgg	cagctttacc	---at---..322...cggc-gttcctaattttcca-----	CAAAGGccCTTTTCAGGGCCGCCAC	--atatttcgatgaa	agagctgg
E. Cab	gctctgag	cggcgttacc	---at---..324...--ac-tagttactacatctaac-----	AAAGGccCTTTTCAGGGCCGCCA	--cgtatttcca-taaa	agagccta
S. Sus	ttccgaat	cctcgtgcc	---at---..324...--gc-cacctaacattttccacc-----	AAAGGccCTTTTCAGGGCCGC	--ccactgttttctgcaa	agagccgg
O. Avi	tcccttgg	cagctctatc	---at---..324...--gc-gttcctaattttccacc-----	AAAGGccCTTTTCAGGGCCGCCcaCATGTTTgaTGAAAG	AGCTG--g	agagccgg
L. Afr	tactgcgg	tgccttgacg	---at---..317...--tt-cttcatcactttaaactTCTCAaCAAAGGccCTTTTCAGGGCCGCCACAGC	--ttcca-taaa	agagctag	agagctag

id=183435 gene=ENSG00000158406 name=HIST1H4H segment=chr6\_26285341\_26285737\_-1 type=EC

Figure 22: CS=13.5



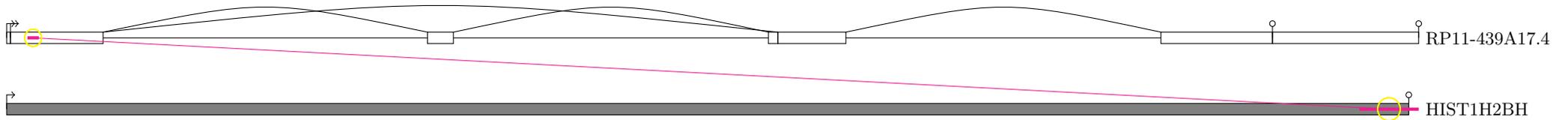
H.Sap	ta	cagctg	ctcttgatgaaaacggca-GTGGCTCTGAAAAGaCCTTT	-----agatcgaccacttaaaaata---.76...	gatggcgacag	gttcgtgt
R.Mac	ta	cagctg	ctcttgatgaaaacggca-GTGGCTCTGAAAAGAGCCTTT	-----agatcgaccacttaaaaata---.76...	gatggcgacag	gttcgtgt
P.Tro	ta	cagctg	ctcttgatgaaaacggca-GTGGCTCTGAAAAGaCCTTT	-----aggtcgaccacttaaaaata---.76...	gatggcgacag	gttcgtgt
P.Abe	ta	cagctg	ctcttgatgaaaacggca-GTGGCTCTGAAAAGAGCCTTT	-----agatcgaccacttaaaaata---.76...	gatggcgacag	gttcgtgt
C.Jac	ta	cagctg	ctcttgatgaaaacggaa-GTGGCTCTAAAAGAGCCTTT	-----agatccaccacttaaacacg---.75...	gatggcgacag	gttcgtgt
M.Mus	ca	cagcta	ctttcatcgacaacgta-GGTGGCTCTGAAAAGAGCCTTTGTGG	gggatgaa---gggaacaggg...75...	gatggcgacag	gttggtgt
R.Nor	ca	cagcta	ctcttattgataacgta-GGTGGCTCTGAAAAGAGCCTTTG	ttggatgaac--cagagatag---.73...	gatggcgacag	gttggtgt
C.Por	ta	cagctg	ctcttt-tggaacgt-AGGTGGCTCTGAAAAGAGCCTTT	---aagtgatatttagttagta---.73...	gatggcgacag	gttggtgt
O.Cun	ta	cagctg	ctctcagcgaaca-CGTGGGTGGCTCTGAAAAGAGCCTTT	---aggtgactgctatagacac---.77...	gatggcgacag	gttcgtgt
C.Fam	ta	cagctg	ctcctcgtgaaatca-TGGGTGGCTCTGAAAAGAGCCTTT	---aggtggccttctgataaac---.78...	gatggcgacag	gttggtgt
F.Cat	ca	cagcta	ctcctcgtgaaaca-TGGGTGGCTCTGAAAAGAGCC	---gtaggtggctccacttaaaa---.81...	gatagcgacag	gttcgtgt
B.Tau	ca	cagctt	ctttcaagtgtagtGTGGGTGGCTCTGAAAAGAGCCTTTG	gaTTGatggaacctcagcacagcg...80...	gatggcgacag	gttcgtgt
E.Cab	ca	cagctg	cttttcatgcaaca-TGGGTGGCTCTAAAAGAGCCTTT	---agatcgctgcttaataaac---.79...	gatggcgacag	gttggtgt
S.Sus	ta	caactg	ctcctttt-GAAAaGGTgaGTGGCTCTGAAAAGAGCCTTT	---aagatagtctacgtaaaaa---.80...	gatggcgacag	gttcgtgt
O.Avi	ta	cagctg	ctttttaagaaac-GTGGGTGGCTCTGAAAAGAGCCTTT	---agatcgtctgttttaaaag---.78...	gatggcgacag	gttcgtgt
L.Afr	ca	cagccg	ttttcgaatGCTgtGTGGGTGGCTCTGAAAAGAGCCTTTGG	gatgatggaaccccgagcc---.86...	gatggcgacag	gttcgtgt
		*	*****		*** **	*** **

id=402330 gene=ENSG00000227193 name=RP11-439A17.4 segment=chr1\_120905007\_120905153\_-1 type=EN

H.Sap	---ttcctttc	actcactttctg-...431...	-----aaatgtaacttacaagaca----	AAAGGcTCTTTTCAGAGCCAC	cca	ccatttct--
R.Mac	---ttccttcc	agtcaactttctg-...431...	-----aagtgtaaacttataagaca----	AAAGGCTCTTTTCAGAGCCAC	cca	ccgtttct--
P.Tro	---ttccttcc	actcactttctg-...431...	-----aaatgtaacttacaagaca----	AAAGGcTCTTTTCAGAGCCAC	cca	ccatttct--
P.Abe	---ttccttcc	actcactttctg-...417...	-----aaatgtaacttataagaca----	AAAGGCTCTTTTCAGAGCCAC	cca	ccatttct--
C.Jac	---tttcttcc	agtctgtttctga-...430...	-----aaatgtaaatattataagaca----	AAAGGCTCTTTTCAGAGCCAC	cca	ccatttct--
M.Mus	---tttttctc	tcttactgctg-...408...	-----gtgaaccaaacattacgaa--TCACc	AAAGGCTCTTTTCAGAGCCACT--		cactttctcc
R.Nor	---catctctc	actgagtatcct-...428...	-----tttatacaaacgactatcac----	CAAAGGCTCTTTTCAGAGCCACT--		cactttctcc
C.Por	ctgtactggcg	agt--ctactg--...437...	-----agcaactcaaa--aactaacca--	AAAGGCTCTTTTCAGAGCCACTt		ccatttct--
O.Cun	---gtccgctg	tttcacgttgct-...435...	gcccggccccgcgccgacc-----	AAAGGCTCTTTTCAGAGCCACCAC	G-	gcgctcc--
C.Fam	---ttacttgc	actgtagccaca-...425...	cgagggcaacaattcaaac-----	AAAGGCTCTTTTCAGAGCCACCCA		ctacttct--
F.Cat	---ctcgtttc	gccaaagtgcctc-...448...	-----cccctcccgcataaaccaaa-----	GGCTCTTTTaaGAGCCACCTA		aaatttcc--
B.Tau	---ttgct--tt	agttatttctggt-...418...	tgaattca--tactccaactc-----TAAGaa	CAAAGGCTCTTTTCAGAGCCACCCA	Ta	acttct--
E.Cab	---ttctattc	agtcaacttctg-...426...	-----atacttaagtttctaagaca----	AAAGGCTCTTTTCAGAGCCACCCA		ccatttct--
S.Sus	---tgctcctt	agttactactg-...426...	-----atactcaacctc--aaagaac----	AAAGGCTCTTTTCAGAGCCGCcCA	CCa	TTTct--
O.Avi	---tttctttt	gctcgttggtga-...432...	ttgaacattcaatttagcc-----	AAAGGCTCTTTTCAGAGCCACCCA	C--	nnnnnn
L.Afr	---gtactact	actcacttttgg-...433...	-----agttcagacttcaactaa--a	CCAAAGGCTCTTTTCAGAGCCATCCA	CCAGT	tct--
				*****		

id=531704 gene=ENSG00000233224 name=HIST1H2AM segment=chr6\_27860477\_27860963\_-1 type=EC

Figure 23: CS=9.6



H. Sap	ta	cagctg	ctcttgatgaaaacggc	AGTGGCTCTGAAAAGAtCCTTT	-----	agatcgaccactt	-----	aaaaata..76..	gatggcgcacag	gttcgtgt
R. Mac	ta	cagctg	ctcttgatgaaaacggc	AGTGGCTCTGAAAAGAGCCTTT	-----	agatcgaccactt	-----	aaaaata..76..	gatggcgcacag	gttcgtgt
P. Tro	ta	cagctg	ctcttgatgaaaacggc	AGTGGCTCTGAAAAGaCCTTT	-----	aggtcgaccactt	-----	aaaaata..76..	gatggcgcacag	gttcgtgt
P. Abe	ta	cagctg	ctcttgatgaaaacggc	AGTGGCTCTGAAAAGAGCCTTT	-----	agatcgaccactt	-----	aaaaata..76..	gatggcgcacag	gttcgtgt
M. Mus	ca	cagcta	ctttcatcgacaacgta	GGTGGCTCTGAAAAGAGCCTTgTGGG	-----	ggatggaaggaa	-----	acagggc..74..	gatggcgcacag	gttggtgt
R. Nor	ca	cagcta	ctcttattgataacgtagg	TGGCTCTGAAAAGAGCCTTTGTGG	-----	gatgaaccagagatagctta	-----	..69..	gatggcgcacag	gttggtgt
C. Por	ta	cagctg	ctcttt-tggaaac	GTAGGTGGCTCTGAAAAGAGCCTTT	-----	aaggtgaatttagt	-----	gtatga..73..	gatggcgcacag	gttggtgt
O. Cun	ta	cagctg	ctctcagcgacaac	GTGGGTGGCTCTGAAAAGAGCCTTT	-----	aggttgactgcta	-----	tagacac..77..	gatggcgcacag	gttcgtgt
C. Fam	ta	cagctg	ctcctcgtgaaatca	TGGGTGGCTCTGAAAAGAGCCTTT	-----	aggtggccttctg	-----	ataaac..78..	gatggcgcacag	gttggtgt
F. Cat	ca	cagcta	ctcctcgtgaaaca	TGGGTGGCTCTGAAAAGAGCC	-----	gtaggtggctcactt	-----	aaaa..81..	gatagcgcacag	gttcgtgt
B. Tau	ca	cagctt	ctttc	CGTGGGTGGCTCTGAAAAGAGCCTTTGgATTGATGG	-----	aacctcgagcacagcgaca	-----	..76..	gatggcgcacag	gttcgtgt
E. Cab	ca	cagctg	cttttcatgcaaaaca	TGGGTGGCTCTAAAAaGAGCCTTT	-----	agatcgctgctt	-----	aataaac..79..	gatggcgcacag	gttggtgt
S. Sus	ta	caactg	ctcctttt	GAAAAggTAGTGGCTCTGAAAAGAGCCTTT	-----	aagatagctcactg	-----	aaaaa..80..	gatggcacacag	gttcgtgt
O. Avi	ta	cagctg	ctttttaagaaaacg	TGGGTGGCTCTGAAAAGAGCCTTT	-----	agatcgtctgttt	-----	ttaaaag..78..	gatggcgcacag	gttcgtgt
L. Afr	ca	cagcgg	ttttc	gaatgctgTTGTGggTGGCTCTGAAAAGAGCCTTTGG	-----	atgagatggaaccccagcc	-----	..86..	gatggcgcacag	gttcgtgt
			*** *	*		***** ***** **			*** ** *****	*** ** *

id=402330 gene=ENSG00000227193 name=RP11-439A17.4 segment=chr1\_120905007\_120905153\_-1 type=EN

H. Sap	--ttgttgca	atgcctgatcca..369..	-atggacgcatgttcaaacc	-----	AAAGGcTCTTTTCAGAGCCACT	-----	ta	atgatttc-
R. Mac	--ttgttgca	atgcctgatcca..369..	-atggacgcctgttcaaacc	-----	AAAGGCTCTTTTCAGAGCCACT	-----	ta	acaatttc-
P. Tro	--ttgttgca	atgcctgatcca..369..	-atggacgcatgttcaaacc	-----	AAAGGcTCTTTTCAGAGCCACT	-----	ta	atgatttc-
P. Abe	--ttgttgca	atgcctgatcca..369..	-atggacgcatgttcaaacc	-----	AAAGGCTCTTTTCAGAGCCACT	-----	ta	atgatttc-
M. Mus	--tgttcaact	atgcctgagccc..371..	-gctcaagactcagctcttaa	-----	CCCAAAGGCTCTTTTCAGAGCCACT	-----	c	aagacttca
R. Nor	--atctaaaa	atgcctgatccg..363..	-aagtgagttcctttaactca	-----	CTAAccCAAAGGCTCTTTTCAGAGCCA	-----	agc	acattctc-
C. Por	tgcttgcaag	atgcctgaac--..388..	-tctgtctgcacttcacccc	-----	AAAGGCTCTTTTCAGAGCCACTAC	-----	-----	ctcttctc-
O. Cun	--ctgcagcc	atgcctgaacc..381..	-gcgccg-cgcccctcacc	-----	AAAGGCTCTTTTCAGAGCCACTCAC	-----	-----	-aaccac-
C. Fam	--tttgatt	atgcctgagccc..381..	-agcgtctccttcccaacccc	-----	AAAGGCTCTTTTCAGAGCCACTCA	-----	-----	ctccttca
F. Cat	--tgtgcgccc	atgcctgagccc..385..	-ccctcttaccacccc	-----	GGCTCTTTTCAGAGCCGCTCA	-----	-----	accttca
B. Tau	--cttctatc	atgcctgagccc..362..	-caagttaaattgttttaggag	CTGTCAAAc	CCCAAAGGCTCTTTTCAGAGCCACTCAG	-----	-----	ttttcc-
E. Cab	--ttctcatc	atgcctgagcta..375..	-ttacaaccacgtgaaacc	-----	AAAGGCTCTTTTCAGAGCCACTTA	-----	-----	ctctctca
S. Sus	--ctgataac	atgcctgagccc..377..	-ttaagtcattgtcaaacc	-----	AAAGGCTCTTTTCAGAGCCACTTA	aggTTTTCT	-----	-----
O. Avi	--tcccgcgc	atgcctgaacca..393..	-taaggctggcctacaacc	-----	AAAGGCTCTTTTCAGAGCCACTCA	-----	-----	gtcttcta
L. Afr	--tccttacc	atgcctgaacca..372..	-tttacctgggacactgaaac	-----	CCAAAGGCTCTTTTCAGAGCCACACAG	-----	-----	atctc-
			***** *		*****			

id=324373 gene=ENSG00000197459 name=HIST1H2BH segment=chr6\_26251879\_26252303\_1 type=EC

Figure 24: CS=9