

Supplemental Table 5

This table contains the sequences of the human tRNAs as encoded in the genome, with the 3' CCA sequence tag appended. The 3' end of tRNA-Sec on chromosome 19 was moved one position downstream based on the position of the 3' CCA tags in the FANTOM 4 short RNA libraries. The position on the chromosome, as written in the header lines, is with respect to the human genome assembly hg18 (NCBI build 36.1) (The Genome Sequencing Consortium, 2001).

tRNA	chromosome	strand	start	end	mature sequence
tRNA-Asn	chr1	-	16719667	16719740	GTCTCTGTGGCGCAATCGGTTAGCGCGTTTCG GCTGTAACTGAAAGGTTGGTGGTTCGAGCC CACCCAGGGACGCCA
tRNA-Asn	chr1	-	16731480	16731553	GTCTCTGTGGTGCAATCGGTTAGCGCGTTTCG GCTGTAAACCATAAGGTTGGTGGTTACAGAC CACCCAGGGACGCCA
tRNA-Glu	chr1	-	16734361	16734432	TCCCTGGTGGTCTAGTGGCTAGGATTCGGCG CTTTCACCGCCGCGGCCCGGGTTCGATTCCT GGTCAGGGAACCA
tRNA-Gly	chr1	-	16745021	16745091	GCATTGGTGGTTCAGTGGTAGAATTCTCGCC TCCCACGCGGGAGACCCGGGTTCAATTCCTCG GCCAATGCACCA
tRNA-Gly	chr1	-	16877353	16877423	GCGTTGGTGGTTTAGTGGTAGAATTCTCGCC TCCCATGCGGGAGACCCGGGTTCAATTCCTCG GCCAATGCACCA
tRNA-Val	chr1	-	16879088	16879160	GTTTCTGTGGTGTAGTGGTTATCATGTTTCG CTCACACGAGAAAAGTCCCTGATTCGAGACT GGGTGGGAACGCCA
tRNA-Gly	chr1	+	16926367	16926437	GCCTTGGTGGTGCAGTGGTAGAATTCTCGCC TCCCACGTGGGAGACCCGGGTTCAATTCCTCG GCCAATGCACCA
tRNA-Gly	chr1	+	17061003	17061073	GCATTGGTGGTTCAGTGGTAGAATTCTCGCC TCCCACGCGGGAGACCCGGGTTCAATTCCTCG GCCAATGCACCA
tRNA-Glu	chr1	+	17071665	17071736	TCCCTGGTGGTCTAGTGGCTAGGATTCGGCG CTTTCACCGCCGCGGCCCGGGTTCGATTCCT GGCCAGGGAACCA
tRNA-Asn	chr1	+	17074545	17074618	GTCTCTGTGGTGCAATCGGTTAGCGCGTTTCG GCTGTAAACCATAAGGTTGGTGGTTAGAGAC CACCCAGGGACGCCA
tRNA-Asn	chr1	+	17088759	17088832	GTCTCTGTGGCGCAATCGGTTAGCGCGTTTCG GCTGTAAACCGAAAGATTGGTGGTTCGAGCC CACCCAGGGACGCCA
tRNA-Lys	chr1	-	55196130	55196202	GCCCAGCTAGCTCAGTCGGTAGAGCATGAG ACTCTTAATCTCAGGGTCATGGGTTTGAGCC CCACGTTTGGTGCCA

tRNA-Cys	chr1	-	93754422	93754494	GGGGGTATAGCTCAGGTGGTAGAGCATTG ACTGCAGATCAAGAGGTCCCCGGTTCAAATC CGGGTGCCCCCTCCA
tRNA-Arg	chr1	+	94085717	94085801	GGCTCCGTGGCGCAATGGATAGCGCATTGG ACTTCTAGAGGCTGAAGGCATTCAAAGGTTCC CGGGTTCGAGTCCCGGCGGAGTCGCCA
tRNA-Asn	chr1	+	142481551	142481624	GTCTCTGTGGCGCAATCGGTTAGCGCGTTTG ACTGTAACTGAAAGGTTGGTGGTGAAGCC CATCCAGGGATGCCA
tRNA-Asn	chr1	+	143012968	143013041	GTCTCTGTGGTGAATCGGTTAGCGCGTTCC GCTGTTAACCGAAAGCTTGGTGGTTCGAGCC CACCCAGGGATGCCA
tRNA-Asn	chr1	-	143019971	143020044	GTCTCTGTGGCGCAATCGGTTAGCGCGTTTG ACTGTAACTGAAAGGTTGGTGGTGAAGCC CATCCAGGGATGCCA
tRNA-Asn	chr1	+	143193197	143193270	GTCTCTGTGGTGAATCGGTTAGCGCGTTCC GCTGTTAACCGAAAGCTTGGTGGTTTGAGCC CACCCAGGGATGCCA
tRNA-Asn	chr1	-	143200200	143200273	GTCTCTGTGGCGCAATCGGTTAGCGCGTTTG ACTGTAACTGAAAGGTTGGTGGTGAAGCC CATCCAGGGATGCCA
tRNA-Gln	chr1	-	143550793	143550864	GGTTCATGGTGTAAATGGTGAGCACTTTGGA CTCTGAATACAGTGATCAGAGTTCAAGTCTC ACTGGGACCTCCA
tRNA-Gln	chr1	-	144090677	144090748	GGTTCATGGTGTAAATGGTGAGCACTTTGGA CTCTGAATACAGTGATCAGAGTTCAAGTCTC ACTGGGACCTCCA
tRNA-Asn	chr1	+	144097086	144097161	GTCTCTGTGGCGCCATCGGTTAGTGCCTTCG GCTGTTTGAACCGAAAGGCTGGTGGTTCAA GCCACCCAGAGATGCCA
tRNA-Lys	chr1	-	144106879	144106951	GCCCGGCTAGCTCAGTCGGTAGAGCATGAG ACTCTTAATCTCAGGGTCGTGGGTTGAGCC CCACGTTGGGCGCCA
tRNA-His	chr1	-	144108238	144108309	GCCGTGATCGTATAGTGGTTAGTACTCTGCG TTGTGGCCGCAGCAACCTCGGTTCAATCCG AGTCACGGCACCA
tRNA-Gly	chr1	-	144109221	144109292	GCGTTGGTGGTATAGTGGTGAGCATAGCTG CCTTCCAAGCAGTTGACCCGGGTTGATTCC CGGCCAACGCACCA
tRNA-Glu	chr1	-	144110590	144110661	TCCCTGGTGGTCTAGTGGTTAGGATTCGGCG CTCTACCGCCGCGGCCCGGGTTGATTCCC GGTCAGGGAACCA
tRNA-Gln	chr1	+	144674661	144674732	GGTTCATGGTGTAAATGGTGAGCACTCTGGA CTCTGAATCCAGCGATCCGAGTTGAGTCTC GGTGGAACCTCCA
tRNA-Asn	chr1	-	144690391	144690464	GTCTCTGTGGCGCAATCGGTTAGCGCGTTTCG GCTGTAACTGAAAGGTTAGTGGTTCGAGCC

					CACCCGGGGACGCCA
tRNA-Gln	chr1	-	144943384	144943455	GGTTCCATGGTGTAAATGGTGACCACTTTGGA CTCTGAATACAGTGATCAGAGTTCAAGTCTC ACTGGAACCTCCA
tRNA-His	chr1	+	145011397	145011468	GCCGTGATCGTATAGTGGTTAGTACTCTGCG TTGTGGCCGCAGCAACCTCGGTTTCAATCCG AGTCACGGCACCA
tRNA-Gln	chr1	+	145971662	145971733	GGTTCCATGGTGTAAATGGTGAGCACTCTGGA CTCTGAATCCAGCGATCCGAGTTTCAAGTCTC GGTGGAACTCCA
tRNA-Asn	chr1	-	145987391	145987464	GTCTCTGTGGCGCAATCGGTTAGCGCGTTTCG GCTGTTAACTGAAAGGTTAGTGGTTTCAAGCC CACCCGGGGACGCCA
tRNA-Asn	chr1	+	146185653	146185726	GTCTCTGTGGCGCAATCGGTCAGAGCGTTTCG GCTATTAACCGAACGGTGAGTAGTTCAAGAC CACCCAGGGACGCCA
tRNA-Gln	chr1	-	146204006	146204077	GGTTCCATGGTGTAAATGGTAAGCACTCTGGA CTCTGAATCCAGCGATCCGAGTTTCAAGTCTC GGTGGAACTCCA
tRNA-His	chr1	+	146220095	146220166	GCCGTGATCGTATAGTGGTTAGTACTCTGCG TTGTGGCCGCAGCAACCTCGGTTTCAATCCG AGTCACGGCACCA
tRNA-His	chr1	-	146241469	146241540	GCCGTGATCGTATAGTGGTTAGTACTCTGCG TTGTGGCCGCAGCAACCTCGGTTTCAATCCG AGTCACGGCACCA
tRNA-Gln	chr1	+	146267561	146267632	GGTTCCATGGTGTAAATGGTAAGCACTCTGGA CTCTGAATCCAGCCATCTGAGTTTCAAGTCTCT GTGGAACTCCA
tRNA-Asn	chr1	+	146344161	146344234	GTCTCTGTGGCGCAATCGGTTAGCGCGTTTTCG ACTGTTAACTGAAAGGTTGGTGGTGCAAGCC CATCCAGGGATGCCA
tRNA-Asn	chr1	+	146467429	146467502	GTCTCTGTGGCGTAGTCGGTTAGCGCGTTTCG GCTGTTAACCGAAAAGTTGGTGGTTTCAAGCC CACCCAGGAACGCCA
tRNA-Asn	chr1	+	146614739	146614812	GTCTCTGTGGCGCAATCGGTTAGCGCGTTTCG GCTGTTAACCGAAAAGGTTGGTGGTTTCAAGCC CACCCAGGGACGCCA
tRNA-Asn	chr1	-	146864938	146865011	GTCTCTGTGGCGCAATCGGTTAGCGCATTTCG GCTGTTAACCGAAAAGGTTGGTGGTTTCAAGCC CACCCAGGGACGCCA
tRNA-Asn	chr1	-	147026980	147027053	GTCTCTGTGGCGCAATCGGTTAGCGCATTTCG GCTGTTAACCGAAAAGGTTGGTGGTTTCAAGCC CACCCAGGGACGCCA
tRNA-His	chr1	-	147422452	147422523	GCCATGATCGTATAGTGGTTAGTACTCTGCG CTGTGGCCGCAGCAACCTCGGTTTCAATCCG AGTCACGGCACCA
tRNA-Gln	chr1	+	147452749	147452820	GGTTCCATGGTGTAAATGGTAAGCACTCTGGA

					CTCTGAATCCAGCGATCCGAGTTCGAGTCTC GGTGGAACCTCCA
tRNA-Asn	chr1	-	147497194	147497267	GTCTCTGTGGCGCAATGGGTTAGCGCGTTTCG GCTGTTAACCGAAAGGTTGGTGGTTCGAGCC CATCCAGGGACGCCA
tRNA-Asn	chr1	-	147551127	147551200	ATCTCCGTGGAGCAATTGGTTAGCGCGTTTCG GCTGTTAACCGAAAGTGGTGGTTCGAGCC TACCCAGGGACGCCA
tRNA-Val	chr1	-	147561290	147561360	GCACTGGTGGTTCAGTGGTAGAATTCTCGCC TCACACGCGGGACACCCGGGTTCAATTCCCG GTCAAGGCACCA
tRNA-Val	chr1	-	147565179	147565251	GTTTCCGTAGTGTAGTGGTTATCACGTTTCGC CTCACACGCGAAAGGTCCCCGGTTCGAAACT GGGCGGAAACACCA
tRNA-Asn	chr1	-	147592896	147592969	GTCTCTGTGGCGCAATCGGCTAGCGCGTTTG GCTGTTAACTAAAAAGTTGGTGGTTCGAACA CACCCAGAGGCGCCA
tRNA-Glu	chr1	+	147600896	147600964	TCCCTGGTAGTCTAGTGGCTAAAGTTTGGCG CTCTACCGCCGGGACTGGTTGATTCCAGAT CAGGGGACCA
tRNA-Asn	chr1	+	147875233	147875306	GTCTCTGTGGCGCAATCGGTTAGCGCGTTTG ACTGTTAACTGAAAGGTTGGTGGTGAAGCC CATCCAGGGATGCCA
tRNA-Asn	chr1	-	147882241	147882314	GTCTCTGTGGTGCAATCGGTTAGCGCGTTCC GCTGTTAACCGAAAGCTTGGTGGTTCGAGCC CACCCAGGGATGCCA
tRNA-Glu	chr1	-	147930979	147931051	TCCCTGGTGGTCTAGTGGCTAGGATTCGGCG CTTTCACCGCCTGCAGCTCGAGTTCGATTCT GGTCAGGGAACCA
tRNA-Asn	chr1	-	147936681	147936754	ATCTCCGTGGAGCAATTGGTTAGCGCGTTTCG GCCGTTAACCGGAAAGTTGGTGGTTCGAGC CTACCCAGGGACGCCA
tRNA-Val	chr1	-	147950712	147950785	GTTTCCGTAGTGTAGTGGTTATCACGTTTCGC CTCACACGCGTAAAGGTCCCCGGTTCGAAAC CGGGCGGAAACACCA
tRNA-Asn	chr1	-	147978422	147978495	GTCTCTGTGGCGCAATCGGCTAGCGCGTTTG GCTGTTAACTAAAAGGTTGGTGGTTCGAACC CACCCAGAGGCGCCA
tRNA-Glu	chr1	+	147986426	147986494	TCCCTGGTAGTCTAGTGGCTAAAGTTTGGCG CTTTCACCGCCGGGACTGGTTGATTCCAGAT CAGGGGACCA
tRNA-Ala	chr1	-	148284006	148284076	GGGGGTGTAGATCAGTGGTAGGGCGCACGC TTAGCATGCATGAGGCCCTGGGTCAATCCCC AGCACCTCCACCA
tRNA-Met	chr1	+	151910350	151910421	AGCAGAGTGGCGCAGCGGAAGCGTGCTGG GCCATAACCCAGAGGTCGATGGATCGAAA CCATCCTCTGCTACCA

tRNA-Arg	chr1	-	157378025	157378098	GTCTCTGTGGCGCAATGGACGAGCGCGCTG GACTTCTAATCCAGAGGTTCCGGGTTGAGT CCCGGCAGAGATGCCA
tRNA-Val	chr1	-	159636114	159636186	GTTTCCGTAGTGTAGTGGTTATCACGTTGCG CTCACACGCGAAAGGTCCCCGGTTCGAAACC GGGCGGAAACACCA
tRNA-Glu	chr1	-	159658507	159658578	TCCCTGGTGGTCTAGTGGCTAGGATTCGGCG CTTTCACCGCCGCGGCCCGGGTTCGATTCCC GGTCAGGGAACCA
tRNA-Asn	chr1	-	159664491	159664564	GTCTCTGTGGCGCAATCGGTTAGCGCGTTGCG GCTGTTAACCGAAAGGTTGGTGGTTCGAGCC CACCCAGGGACGCCA
tRNA-Gly	chr1	-	159676585	159676656	GCGTTGGTGGTATAGTGGTGAGCATAGTTG CCTTCCAAGCAGTTGACCCGGGCTCGATTCC CGCCCAACGCACCA
tRNA-Asp	chr1	-	159677239	159677310	TCCTCGTTAGTATAGTGGTGAGTATCCCCGC CTGTCACGCGGGAGACCGGGGTTTCGATTCC CCGACGGGGAGCCA
tRNA-Leu	chr1	+	159677947	159678029	GTCAGGATGGCCGAGCGGTCTAAGGCGCTG CGTTCAGGTCGCAGTCTCCCTGGAGGCGTG GGTTCGAATCCCACTCCTGACACCA
tRNA-Gly	chr1	+	159679718	159679788	GCATGGGTGGTTCAGTGGTAGAATTCTCGCC TGCCACGCGGGAGGCCCGGGTTCGATTCCC GGCCCATGCACCA
tRNA-Glu	chr1	-	159683642	159683713	TCCCTGGTGGTCTAGTGGTTAGGATTCGGCG CTCTACCGCCGCGGCCCGGGTTCGATTCCC GGTCAGGGAACCA
tRNA-Gly	chr1	-	159683999	159684070	GCGTTGGTGGTATAGTGGTGAGCATAGCTG CCTTCCAAGCAGTTGACCCGGGTTTCGATTCC CGGCCAACGCACCA
tRNA-Asp	chr1	-	159684657	159684728	TCCTCGTTAGTATAGTGGTGAGTATCCCCGC CTGTCACGCGGGAGACCGGGGTTTCGATTCC CCGACGGGGAGCCA
tRNA-Leu	chr1	+	159685365	159685447	GTCAGGATGGCCGAGCGGTCTAAGGCGCTG CGTTCAGGTCGCAGTCTCCCTGGAGGCGTG GGTTCGAATCCCACTCCTGACACCA
tRNA-Gly	chr1	+	159687091	159687161	GCATGGGTGGTTCAGTGGTAGAATTCTCGCC TGCCACGCGGGAGGCCCGGGTTCGATTCCC GGCCCATGCACCA
tRNA-Glu	chr1	-	159691022	159691093	TCCCTGGTGGTCTAGTGGTTAGGATTCGGCG CTCTACCGCCGCGGCCCGGGTTCGATTCCC GGTCAGGGAACCA
tRNA-Gly	chr1	-	159691380	159691451	GCGTTGGTGGTATAGTGGTGAGCATAGCTG CCTTCCAAGCAGTTGACCCGGGTTTCGATTCC CGGCCAACGCACCA
tRNA-Asp	chr1	-	159692038	159692109	TCCTCGTTAGTATAGTGGTGAGTATCCCCGC CTGTCACGCGGGAGACCGGGGTTTCGATTCC

					CCGACGGGGAGCCA
tRNA-Leu	chr1	+	159692746	159692828	GTCAGGATGGCCGAGCGGTCTAAGGCGCTG CGTTCAGGTCGCAGTCTCCCCTGGAGGCGTG GGTTCGAATCCCACTCCTGACACCA
tRNA-Gly	chr1	+	159694522	159694592	GCATGGGTGGTTCAGTGGTAGAATTCTCGCC TGCCACGCGGGAGGCCCGGGTTCGATTCCC GGCCCATGCACCA
tRNA-Glu	chr1	-	159698433	159698504	TCCCTGGTGGTCTAGTGGTTAGGATTCGGCG CTCTACCGCCGCGGCCCGGGTTCGATTCCC GGTCAGGGAACCA
tRNA-Gly	chr1	-	159698790	159698861	GCGTTGGTGGTATAGTGGTGAGCATAGCTG CCTTCCAAGCAGTTGACCCGGGTTCGATTCC CGGCCAACGCACCA
tRNA-Asp	chr1	-	159699448	159699519	TCCTCGTTAGTATAGTGGTGAGTATCCCCGC CTGTCACGCGGGAGACCGGGTTCGATTCC CCGACGGGGAGCCA
tRNA-Leu	chr1	+	159700156	159700238	GTCAGGATGGCCGAGCGGTCTAAGGCGCTG CGTTCAGGTCGCAGTCTCCCCTGGAGGCGTG GGTTCGAATCCCACTCCTGACACCA
tRNA-Gly	chr1	+	159701882	159701952	GCATGGGTGGTTCAGTGGTAGAATTCTCGCC TGCCACGCGGGAGGCCCGGGTTCGATTCCC GGCCCATGCACCA
tRNA-Glu	chr1	-	159705813	159705884	TCCCTGGTGGTCTAGTGGTTAGGATTCGGCG CTCTACCGCCGCGGCCCGGGTTCGATTCCC GGTCAGGGAACCA
tRNA-Gly	chr1	-	159706171	159706242	GCGTTGGTGGTATAGTGGTGAGCATAGCTG CCTTCCAAGCAGTTGACCCGGGTTCGATTCC CGGCCAACGCACCA
tRNA-Asp	chr1	-	159706829	159706900	TCCTCGTTAGTATAGTGGTGAGTATCCCCGC CTGTCACGCGGGAGACCGGGTTCGATTCC CCGACGGGGAGCCA
tRNA-Leu	chr1	+	159707537	159707619	GTCAGGATGGCCGAGCGGTCTAAGGCGCTG CGTTCAGGTCGCAGTCTCCCCTGGAGGCGTG GGTTCGAATCCCACTCCTGACACCA
tRNA-Gly	chr1	+	159716980	159717050	GCATAGGTGGTTCAGTGGTAGAATTCTTGCC TGCCACGCAGGAGGCCAGGTTTGATTCTGTG GCCCATGCACCA
tRNA-Gly	chr1	-	159760261	159760331	GCATTGGTGGTTCAGTGGTAGAATTCTCGCC TGCCACGCGGGAGGCCCGGGTTCGATTCCC GGCCAATGCACCA
tRNA-Leu	chr1	-	159766756	159766838	GTCAGGATGGCCGAGCGGTCTAAGGCGCTG CGTTCAGGTCGCAGTCTCCCCTGGAGGCGTG GGTTCGAATCCCACTCCTGACACCA
tRNA-Gly	chr1	+	159767527	159767598	GCGTTGGTGGTATAGTGGTGAGCATAGCTG CCTTCCAAGCAGTTGACCCGGGTTCGATTCC CGGCCAACGCACCA
tRNA-Asp	chr1	+	159768539	159768610	TACTCGTTAGTATAGTGGTGCGTATCCCCGT

					CTGTACGCGGGAGAGCGGGGTTGCTCTC CCGACGGGGAGCCA
tRNA-Asn	chr1	+	159776655	159776728	GTCTCTGTGGCGCAATCGGTTAGCGCGTTCCG GCTGTTAACCGAAAGGTTGGTGGTTCGATCC CACCCAGGGACGCCA
tRNA-Asp	chr1	+	159841212	159841283	TCCTTGTTACTATAGTGGTAAGTATCTCTGCC TGTCATGCATGAGAGAGGGGGTCGATTCCCT GACGGGGAGCCA
tRNA-Leu	chr1	-	159848360	159848443	GTCAGGATGGCCGAGCAGTCTTAAGGCGCT GCGTTCAAATCGCACCTCCGCTGGAGGCGT GGGTTCAATCCCACTTTTGACACCA
tRNA-Glu	chr1	+	159849132	159849203	GCGTTGGTGGTGTAGTGGTGAGCACAGCTG CCTTTCAAGCAGTTAACGCGGGTTCGATTCC CGGGTAACGAACCA
tRNA-Asn	chr1	+	159858089	159858162	GTTTCTGTAGCGCGATCGGTTAGCGCCTTCG GCTGTTAAACGAAAGGTTGGTGGTTCGTTCC CACCCGGGACACCA
tRNA-Pro	chr1	+	165950586	165950657	GGCTCGTTGGTCTAGGGGTATGATTCTCGCT TCGGGTGCGAGAGGTCCCGGGTTCAAATCC CGGACGAGCCCCCA
tRNA-Pro	chr1	-	165951349	165951420	GGCTCGTTGGTCTAGGGGTATGATTCTCGCT TAGGGTGCGAGAGGTCCCGGGTTCAAATCC CGGACGAGCCCCCA
tRNA-Glu	chr1	-	170424162	170424230	CCCTGTGGTCTAGTGGTTAGGAGTTGGTGCT TTCGTCATGACAGCCCAGGTTCAATTCCTGG TTAGAGACCA
tRNA-Val	chr1	-	178450899	178450971	GTTTCCATAGTGTACTGGTTATCACATTACC TAACACGCGAAAGGTCCTTGTTTGAAACCA GGCAGAAACACCA
tRNA-Lys	chr1	+	202742278	202742350	GCCCGGATAGCTCAGTCGGTAGAGCATCAG ACTTTTAATCTGAGGGTCCAGGGTTCAAGTC CCTGTTGCGGCGCCA
tRNA-Lys	chr1	-	202742781	202742853	GCCCGGATAGCTCAGTCGGTAGAGCATCAG ACTTTTAATCTGAGGGTCCAGGGTTCAAGTC CCTGTTGCGGCGCCA
tRNA-Lys	chr1	+	203709894	203709966	GCCCGGAGAGCTCAGTGGGTAGAGCATCAG ACTTTTAATCTGAGGGTCCAGGGTTCAAGTC CTCGTTGCGGCACCA
tRNA-Thr	chr1	+	220704970	220705042	GGCTCCATAGCTCAGTGGTTAGAGCACTGGT CTTGTAACACAGGGGTCGCGAGTTCGATCCT CGCTGGGGCCTCCA
tRNA-Leu	chr1	+	247134677	247134782	GTCAGGATGGCCGAGTGGTCTAAGGCGCCA GACTCAAGGTAAGCACCTTGCTGCGGGCTT TCTGGTCTCCGGATGGAGGCGTGGGTTCTGA ATCCCACTTCTGACACCA
tRNA-Glu	chr1	+	247135070	247135141	TCCCTGGTGGTCTAGTGGTTAGGATTCGGCG CTCTACCGCCGCGGCCCGGGTTCGATCCCC

					GGTCAGGAAACCA
tRNA-Gln	chr1_random	+	553277	553348	GGTTCATGGTGTAAATGGTGAGCACTTTGGA CTCTGAATACAGTGATCAGAGTTCAAGTCTC ACTGGGACCTCCA
tRNA-Asn	chr1_random	+	906435	906508	GTCTCTGTGGCGCAATCGGCTAGCGCGTTTG GCTGTAACTAAAAGGTTGGCGGTTCGAACC CACCCAGAGGCGCCA
tRNA-Tyr	chr2	+	27127154	27127242	CCTTCGATAGCTCAGTTGGTAGAGCGGAGG ACTGTAGTGGATAGGGCGTGGCAATCCTTA GGTCGCTGGTTCGATTCCGGCTCGAAGGACC A
tRNA-Ala	chr2	+	27127586	27127658	GGGGGATTAGCTCAAATGGTAGAGCGCTCG CTTAGCATGCGAGAGGTAGCGGGATCGATG CCCGCATCCTCCACCA
tRNA-Leu	chr2	+	30131072	30131144	GGGCCAGTGGCTCAATGGATAATGCGTCTG ACTAAGAATCAGAAGATTCCAGCCTTGACTC CTGGCTGGCTCACCA
tRNA-Ile	chr2	+	42891180	42891272	GCTCCAGTGGCGCAATCGGTTAGCGCGCGG TACTTATACAGCAGTACATGCAGAGCAATGC CGAGGTTGTGAGTTCGAGCCTCACCTGGAG CACCA
tRNA-Gly	chr2	-	70329627	70329697	GCGCCGCTGGTGTAGTGGTATCATGCAAGAT TCCATTCTTGCGACCCGGGTTGATTCCCG GGCGGCGCACCA
tRNA-Glu	chr2	+	74977554	74977622	GCCTGTGGTCTAGTGGTTAGAATTCAGTGTT TTCAGTGCTCTAGTCCAGGTTCAATTCCTGGT CAGGGACCA
tRNA-Gln	chr2	-	117498979	117499050	TAGGACATGGTGTAAATAGGTAGAATGGAGA ATTTTGAATTCTCAGGGGTAGGTTCAATTCTT ATAGTTCTAGCCA
tRNA-Ser	chr2	-	130749494	130749563	GAGAAGGTCACAGAGGTTATGGGATTGGCT TGAAACCAGTCTGTGGGGGGTTCGATTCCCT CCTTTTTCACCA
tRNA-Glu	chr2	-	130811171	130811242	TCCCATATGGTCTAGCGGTTAGGATTCCTGG TTTTACCCAGGTGGCCCGGTTGACTCCC GGTATGGGAACCA
tRNA-Ala	chr2	+	156965527	156965598	GGGGATGTAGCTCAGTGGTAGAGCGCGCGC TTCGCATGTGTGAGGTCCCGGTTCAATCCC CGGCATCTCCACCA
tRNA-Gly	chr2	-	156965905	156965975	GCATTGGTGGTTCAGTGGTAGAATTCTCGCC TGCCACGCGGGAGGCCCGGTTGATTCCC GGCCAATGCACCA
tRNA-Tyr	chr2	+	218818794	218818886	CCTTCAATAGTTCAGCTGGTAGAGCAGAGGA CTATAGCTACTTCCTCAGTAGGAGACGTCCTT AGGTTGCTGGTTCGATTCCAGCTTGAAGGAC CA
tRNA-Arg	chr3	-	45705495	45705567	GGGCCAGTGGCGCAATGGATAACGCGTCTG

					ACTACGGATCAGAAGATTCTAGGTTCTGACTC CTGGCTGGCTCGCCA
tRNA-Glu	chr3	-	126895867	126895938	CCCCTGGTGGTCTATCGGTTAGGATTCAGAC CTCTACCACTGCTACCCATGCTCGATTCTG GTCAGGGAACCA
tRNA-Cys	chr3	-	133430634	133430705	GGGGGTGTAGCTCAGTGGTAGAGCATTTGA CTGCAGATCAAGAGGTCCCTGGTTCAAATCC AGGTGCCCCCTCCA
tRNA-Cys	chr3	-	133433332	133433403	GGGGGTATAGCTCAGGGGTAGAGCATTTGA CTGCAGATCAAGAGGTCCCTGGTTCAAATCC AGGTGCCCCCTCCA
tRNA-Leu	chr3	-	149703918	149703999	GGTAGCATGGCTGAGTGGTCTAAGATTCTGA ATTAAGTCTCCAGTCTCTTTGGGGGCGTGGT TTTCAATCCCACCGCTGCTACCA
tRNA-His	chr3	-	149799253	149799324	GCAGTGACTGTATAGTGGTTAGCACTCTGTG TTGTGGCCACAGCAACCATGGTTCAAATCTG AGTCATGACACCA
tRNA-Val	chr3	+	170972712	170972784	GTTTCCGTAGTGTAGTGGTTATCACGTTTCGC CTAACACGCGAAAGGTCCCCGGTTCGAAACC GGGCGGAAACACCA
tRNA-Asp	chr3	-	185848789	185848859	TTCTTGTTAATATAGTGGTGAGTATTCCCACC TGTCATGCGGGAGACGGGGTTCAATTCCCTG ATGGGGAGCCA
tRNA-Gln	chr4	-	40603500	40603572	GACCATGTGGCCTAAGGGAAAAGACATCTC ACTTTGGGTCAGAAGATTGAGGGTTCAAGTC CTTTCATGGTCACCA
tRNA-Cys	chr4	-	124649455	124649526	GGGGGTATAGCTCAGTGGTAGAGCATTTGA CTGCAGATCAAGAGGTCCCCGGTTCAAATCC GGGTGCCCCCTCCA
tRNA-Leu	chr4	-	156604428	156604502	GTTAAGATGGCAGAGCCTGGTAATTGCATAA AACTTAAATTTTATAATCAGAGGTTCAACTC CTCTTCTTAACACCA
tRNA-Lys	chr5	-	26234296	26234368	GCCCGACTACCTCAGTCGGTGGAGCATGGG ACTCTTCATCCCAGGGTTGTGGGTTCGAGCC CCACATTGGGCACCA
tRNA-Asp	chr5	-	141754172	141754243	TCCTCATCAGTATAGTGGTGAGTATCCCCGC CTGTCACGCGGGAGACTGGGGTTTCGATTCCC TGAGGAGGAGCCA
tRNA-Leu	chr5	-	159324619	159324696	GGCAGTGGAGTTTAGTGGTTAAGGACCTGC TCAGACATCACAGGTAGGTAGATCTGGGTTC AAACCCTAGCCCTGGCACCA
tRNA-Val	chr5	+	180456676	180456748	GTTTCCGTAGTGTAGTGGTTATCACGTTTCGC CTCACACGCGAAAGGTCCCCGGTTCGAAACC GGGCGGAAACACCA
tRNA-Leu	chr5	-	180457080	180457161	GGTAGCGTGGCCGAGCGGTCTAAGGCGCTG GATTAAGGCTCCAGTCTCTTCGAGGCGTGG GTTCAATCCCACCGCTGCCACCA

tRNA-Leu	chr5	+	180461446	180461527	GGTAGCGTGGCCGAGCGGTCTAAGGCGCTG GATTAAGGCTCCAGTCTCTTCGGAGGCGTGG GTTTGAATCCCACCGCTGCCACCA
tRNA-Val	chr5	-	180461859	180461931	GTTTCCGTAGTGTAGTGTTATCACGTTTCGC CTCACACGCGAAAGGTCCCCGGTTCGAAACC GGGCGGAAACACCA
tRNA-Val	chr5	+	180523760	180523832	GTTTCCGTAGTGTAGTGTTATCACGTTTCGC CTAACACGCGAAAGGTCCCCGGTTCGAAACC GGGCGGAAACACCA
tRNA-Val	chr5	+	180529216	180529288	GTTTCCGTAGTGTAGTGTTATCACGTTTCGC CTAACACGCGAAAGGTCCCCGGTTCGAAACC GGGCGGAAACACCA
tRNA-Val	chr5	+	180533256	180533328	GTTTCCGTAGTGTAGTGTTATCACGTTTCGC CTCACACGCGAAAGGTCCCCGGTTCGAAACC GGGCGGAAACACCA
tRNA-Leu	chr5	-	180533650	180533731	GGTAGCGTGGCCGAGCGGTCTAAGGCGCTG GATTAAGGCTCCAGTCTCTTCGGAGGCGTGG GTTTGAATCCCACCGCTGCCACCA
tRNA-Leu	chr5	+	180547307	180547388	GGTAGCGTGGCCGAGCGGTCTAAGGCGCTG GATTAAGGCTCCAGTCTCTTCGGGGGCGTG GTTTGAATCCCACCGCTGCCACCA
tRNA-Val	chr5	-	180548022	180548094	GTTTCCGTAGTGTAGTGTCATCACGTTTCGC CTAACACGCGAAAGGTCCCCGGTTCGAAACC GGGCGGAAACACCA
tRNA-Pro	chr5	-	180548460	180548531	GGCTCGTTGGTCTAGGGGTATGATTCTCGCT TTGGGTGCGAGAGGTCCCGGGTTCAAATCC CGGACGAGCCCCCA
tRNA-Thr	chr5	-	180551293	180551364	GGCTCCATAGCTCAGGGGTAGAGCACTGG TCTTGTAACCAGGGTCGCGAGTTCAAATCT CGCTGGGGCCTCCA
tRNA-Ala	chr5	+	180566474	180566545	GGGGATGTAGCTCAGTGGTAGAGCGCATGC TTTGCATGTATGAGGCCCCGGGTTCGATCCC CGGCATCTCCACCA
tRNA-Lys	chr5	+	180567361	180567433	GCCCGGCTAGCTCAGTCGGTAGAGCATGAG ACTCTTAATCTCAGGGTCGTGGGTTCGAGCC CCACGTTGGGCGCCA
tRNA-Val	chr5	-	180577876	180577948	GTTTCCGTAGTGTAGTGTTATCACGTTTCGC CTAACACGCGAAAGGTCCCCGGTTCGAAACC GGGCGGAAACACCA
tRNA-Lys	chr5	-	180581585	180581657	GCCCGGCTAGCTCAGTCGGTAGAGCATGAG ACTCTTAATCTCAGGGTCGTGGGTTCGAGCC CCACGTTGGGCGCCA
tRNA-Val	chr5	-	180582001	180582073	GTTTCCGTAGTGTAGTGTTATCACGTTTCGC CTCACACGCGAAAGGTCCCCGGTTCGAAACC GGGCGGAAACACCA
tRNA-Gln	chr6	+	18944381	18944452	GGTTCCATGGTGTAAATGGTTAGCACTCTGGA CTCTGAATCCAGCGATCCGAGTTCAAATCTC

					GGTGGAACTCCA
tRNA-Met	chr6	+	26394733	26394804	AGCAGAGTGGCGCAGCGGAAGCGTGCTGG GCCATAACCCAGAGGTCGATGGATCGAAA CCATCCTCTGCTACCA
tRNA-Arg	chr6	+	26407884	26407956	GACCACGTGGCCTAATGGATAAGGCGTCTG ACTTCGGATCAGAAGATTGAGGGTTCGAATC CCTTCGTGGTTACCA
tRNA-Ser	chr6	-	26413697	26413780	GGAGAGGCCTGGCCGAGTGGTTAAGGCGAT GGACTGCTAATCCATTGTGCTCTGCACGCGT GGGTTCGAATCCCATCCTCGTCGCCA
tRNA-Gln	chr6	-	26419403	26419474	GGCCCCATGGTGTAAATGGTTAGCACTCTGGA CTTTGAATCCAGCGATCCGAGTTCAAATCTC GGTGGGACCTCCA
tRNA-Gln	chr6	-	26419954	26420025	GGCCCCATGGTGTAAATGGTTAGCACTCTGGA CTTTGAATCCAGCGATCCGAGTTCAAATCTC GGTGGGACCTCCA
tRNA-Ser	chr6	-	26420803	26420884	GTAGTCGTGGCCGAGTGGTTAAGGCGATGG ACTTGAATCCATTGGGGTCTCCCCGCGCAG GTTCGAATCCTGCCGACTACGCCA
tRNA-Met	chr6	-	26421331	26421402	AGCAGAGTGGCGCAGCGGAAGCGTGCTGG GCCATAACCCAGAGGTCGATGGATCGAAA CCATCCTCTGCTACCA
tRNA-Trp	chr6	-	26427309	26427380	GACCTCGTGGCGCAACGGTAGCGCGTCTGA CTCCAGATCAGAAGGTTGCGTGTTCAAATCA CGTCGGGGTCACCA
tRNA-Arg	chr6	+	26431025	26431097	GACCACGTGGCCTAATGGATAAGGCGTCTG ACTTCGGATCAGAAGATTGAGGGTTCGAATC CCTCCGTGGTTACCA
tRNA-Ser	chr6	+	26435796	26435877	GTAGTCGTGGCCGAGTGGTTAAGGCGATGG ACTAGAAATCCATTGGGGTCTCCCCGCGCAG GTTCGAATCCTGCCGACTACGCCA
tRNA-Arg	chr6	+	26436347	26436419	GGGCCAGTGGCGCAATGGATAACGCGTCTG ACTACGGATCAGAAGATTCCAGGTTGACTC CTGGCTGGCTCGCCA
tRNA-Met	chr6	-	26438508	26438579	AGCAGAGTGGCGCAGCGGAAGCGTGCTGG GCCATAACCCAGAGGTCGATGGATCGAAA CCATCCTCTGCTACCA
tRNA-Trp	chr6	-	26439651	26439722	GACCTCGTGGCGCAACGGTAGCGCGTCTGA CTCCAGATCAGAAGGTTGCGTGTTCAAATCA CGTCGGGGTCACCA
tRNA-Leu	chr6	+	26629415	26629497	GTCAGGATGGCCGAGCGGTCTAAGGCGCTG CGTTCAGGTCGCAGTCTCCCTGGAGGCGTG GGTTCGAATCCCACTCCTGACACCA
tRNA-Thr	chr6	-	26641124	26641197	GGCTCCGTGGCTTAGCTGGTTAAAGCGCCTG TCTAGTAAACAGGAGATCCTGGGTTTCAATC CCAGCGGGGCTCCA
tRNA-Arg	chr6	+	26645705	26645777	GGGCCAGTGGCGCAATGGATAACGCGTCTG

					ACTACGGATCAGAAGATTCCAGGTTGACTC CTGGCTGGCTCGCCA
tRNA-Val	chr6	+	26646261	26646333	GTTTCCGTAGTGTAGTGGTTATCACGTTGCG CTCACACGCGAAAGGTCCCCGGTTCGAAACC GGGCGGAAACACCA
tRNA-Ala	chr6	+	26661710	26661781	GGGGATGTAGCTCAGTGGTAGAGCGCATGC TTCGCATGTATGAGGTCCCGGGTTCGATCCC CGGCATCTCCACCA
tRNA-Ile	chr6	+	26662329	26662402	GGCCGGTTAGCTCAGTTGGTTAGAGCGTGG TGCTAATAACGCCAAGGTCGCGGGTTCGATC CCCGTACGGGCCACCA
tRNA-Pro	chr6	+	26663477	26663548	GGCTCGTTGGTCTAGGGGTATGATTCTCGCT TAGGGTGCGAGAGGTCCCGGGTTCAAATCC CGGACGAGCCCCCA
tRNA-Lys	chr6	+	26664753	26664825	GCCCGGCTAGCTCAGTCGGTAGAGCATGAG ACTCTTAATCTCAGGGTCGTGGGTTCGAGCC CCACGTTGGGCGCCA
tRNA-Tyr	chr6	+	26677065	26677155	CCTTCGATAGCTCAGTTGGTAGAGCGGAGG ACTGTAGTTGGCTGTGCTTAGACATCCTTA GGTCGCTGGTTCGAATCCGGCTCGAAGGAC CA
tRNA-Ala	chr6	-	26680071	26680143	GGGGAATTAGCTCAAATGGTAGAGCGCTCG CTTAGCATGCGAGAGGTAGCGGGATCGATG CCCGCATTCTCCACCA
tRNA-Tyr	chr6	+	26683777	26683866	CTTTCGATAGCTCAGTTGGTAGAGCGGAGG ACTGTAGGTTCAATAACTAAGGCATCCTTA GGTCGCTGGTTCGAATCCGGCTCGAAGGAC CA
tRNA-Tyr	chr6	+	26685311	26685399	CCTTCGATAGCTCAGTTGGTAGAGCGGAGG ACTGTAGGCTCATTAAAGCAAGGTATCCTTAG GTCGCTGGTTCGAATCCGGCTCGGAGGACC A
tRNA-Tyr	chr6	+	26703081	26703169	CCTTCGATAGCTCAGCTGGTAGAGCGGAGG ACTGTAGGGTTTGAATGTGGTCATCCTTAG GTCGCTGGTTCGAATCCGGCTCGGAGGACC A
tRNA-Ala	chr6	+	26781569	26781641	GGGGAATTAGCTCAAGTGGTAGAGCGCTTG CTTAGCATGCAAGAGGTAGTGGGATCAATG CCCACATTCTCCACCA
tRNA-Ala	chr6	+	26790694	26790766	GGGGAATTAGCTCAAGTGGTAGAGCGCTTG CTTAGCATGCAAGAGGTAGTGGGATCGATG CCCACATTCTCCACCA
tRNA-Ala	chr6	+	26795464	26795536	GGGGAATTAGCTCAAGTGGTAGAGCGCTTG CTTAGCACGCAAGAGGTAGTGGGATCGATG CCCACATTCTCCACCA
tRNA-Met	chr6	+	26809691	26809763	GCCCTCTTAGCGCAGCTGGCAGCGCGTCAGT CTCATAATCTGAAGGTCCTGAGTTCAAGCCT

					CAGAGAGGGCACCA
tRNA-Ala	chr6	+	26813585	26813657	GGGGAATTAGCTCAAGCGGTAGAGCGCTTG CTTAGCATGCAAGAGGTAGTGGGATCGATG CCCACATTCTCCACCA
tRNA-Ile	chr6	-	26829200	26829273	GGCCGGTTAGCTCAGTTGGTCAGAGCGTGG TGCTAATAACGCCAAGGTCGCGGGTTCGATC CCCGTACGGGCCACCA
tRNA-Ala	chr6	+	26836235	26836307	GGGGAATTGGCTCAAGCGGTAGAGCGCTTG CTTAGCATGCAAGAGGTAGCAGGATCGACG CCTGCACTCTCCACCA
tRNA-Ala	chr6	+	26838716	26838788	GGGGAATTAGCTCAGGCGGTAGAGCGCTCG CTTAGCATGCGAGAGGTAGCGGGATCGACG CCCGCATTCTCCACCA
tRNA-Met	chr6	-	26843553	26843625	GCCCTCTTAGCGCAGCGGGCAGCGCGTCAG TTCATAATCTGAAGGTCTGAGTTCGAGCC TCAGAGAGGGCACCA
tRNA-Ile	chr6	-	26853234	26853307	GGCCGGTTAGCTCAGTTGGTTAGAGCGTGG TGCTAATAACGCTAAGGTCGCGGGTTCGATC CCCGTACTGGCCACCA
tRNA-Ala	chr6	+	26859897	26859969	GGGGGATTAGCTCAAGCGGTAGGGTGCCTG CTTAGCATGCAAGAGGTAGCAGGATCGACG CCTGCATTCTCCACCA
tRNA-Met	chr6	-	26866529	26866601	GCCCTCTTAGCGCAGCGGGCAGCGCGTCAG TTCATAATCTGAAGGTCTGAGTTCGAGCC TCAGAGAGGGCACCA
tRNA-Met	chr6	+	26874423	26874495	GCCCTCTTAGCGCAGCGGGCAGCGCGTCAG TTCATAATCTGAAGGTCTGAGTTCGAGCC TCAGAGAGGGCACCA
tRNA-Ala	chr6	-	26879269	26879341	GGGGAATTAGCTCAGGCGGTAGAGCGCTCG CTTAGCATGCGAGAGGTAGCGGGATCGACG CCCGCATTCTCCACCA
tRNA-Ala	chr6	-	26881750	26881822	GGGGAATTGGCTCAAGCGGTAGAGCGCTTG CTTAGCATGCAAGAGGTAGCAGGATCGACG CCTGCACTCTCCACCA
tRNA-Ile	chr6	+	26888811	26888884	GGCCGGTTAGCTCAGTTGGTCAGAGCGTGG TGCTAATAACGCCAAGGTCGCGGGTTCGATC CCCGTACGGGCCACCA
tRNA-Ala	chr6	-	26903985	26904057	GGGGAATTAGCTCAAGTGGTAGAGCGCTTG CTTAGCATGCAAGAGGTAGTGGGATCGATG CCCACATTCTCCACCA
tRNA-Ile	chr6	+	27096104	27096197	GCTCCAGTGGCGCAATCGGTTAGCGCGCGG TACTTATATGGCAGTATGTGTGCGAGTGATG CCGAGGTTGTGAGTTCGAGCCTCACCTGGA GCACCA
tRNA-Pro	chr6	+	27167500	27167571	GGCTCGTTGGTCTAGGGGTATGATTCTCGCT TCGGGTGTGAGAGGTCCCGGGTTCAAATCC CGGACGAGCCCCCA

tRNA-Ser	chr6	+	27173064	27173145	GACGAGGTGGCCGAGTGGTTAAGGCGATGG ACTGCTAATCCATTGTGCTCTGCACGCGTGG GTTTGAATCCCACCCTCGTCGCCA
tRNA-Val	chr6	+	27226001	27226073	GTTTCTGTAGTATGGTGGTTATCACGTTAGT CTCACACGTGAAAGGTCCCTGGTTCGAAACC AGGTGGAACACCA
tRNA-His	chr6	+	27233885	27233956	GCCGTGATCGTATAGTGGTTAGTACTCTGCG TTGTGGCCGCAGCAACCTCGGTTTGAATCCG AGTCACGGCACCA
tRNA-Thr	chr6	+	27238029	27238102	GGCCCTGTGGCTTAGCTGGTCAAAGCGCCTG TCTAGTAAACAGGAGATCCTGGGTTTGAATC CCAGCGGGGCTCCA
tRNA-Ile	chr6	-	27252973	27253046	GGCCGGTTAGCTCAGTTGGTTAGAGCGTGG TGCTAATAACGCCAAGGTCGCGGGTTCGATC CCCGTACGGGCCACCA
tRNA-Val	chr6	-	27281846	27281918	GTTTCCGTAGTGGAGTGGTTATCACGTTTCGC CTCACACGCGAAAGGTCCCGGTTTGAACCC AGGCGGAAACACCA
tRNA-Ser	chr6	+	27285607	27285688	GCTGTGATGGCCGAGTGGTTAAGGCGTTGG ACTCGAAATCCAATGGGGTCTCCCCGCGCAG GTTCAAATCCTGCTCACAGCGCCA
tRNA-Arg	chr6	-	27289602	27289674	GGGCCAGTGGCGCAATGGATAACGCGTCTG ACTACGGATCAGAAGATTCTAGGTTTCTGACTC CTGGCTGGCTCGCCA
tRNA-Arg	chr6	+	27290931	27291003	GGGCCAGTGGCGCAATGGATAACGCGTCTG ACTACGGATCAGAAGATTCTAGGTTTCTGACTC CTGGCTGGCTCGCCA
tRNA-Leu	chr6	-	27306313	27306395	ACCGGATGGCTGAGTGGTTAAGGCGTTGG ACTTAAGATCCAATGGACAGGTGTCCGCGTG GGTTCGAGCCCCACTCCCGGTACCA
tRNA-Val	chr6	+	27311267	27311339	GTTTCCGTAGTGTAGTGGTTATCACGTTTGC CTAACACGCGAAAGGTCCCGGTTTGAACCC GGGCAGAAACACCA
tRNA-Ile	chr6	-	27313329	27313402	GGCCGGTTAGCTCAGTTGGTTAGAGCGTGG TGCTAATAACGCCAAGGTCGCGGGTTCGATC CCCGTACGGGCCACCA
tRNA-Ile	chr6	+	27349718	27349791	GGCTGGTTAGTTCAGTTGGTTAGAGCGTGGT GCTAATAACGCCAAGGTCGTGGGTTTCTGATCC CCATATCGGCCACCA
tRNA-Ile	chr6	-	27350969	27351042	GGCTGGTTAGCTCAGTTGGTTAGAGCGTGG TGCTAATAACGCCAAGGTCGCGGGTTCGATC CCCGTACTGGGCCACCA
tRNA-Val	chr6	-	27356028	27356100	GCTTCTGTAGTGTAGTGGTTATCACGTTTCGC CTCACACGCGAAAGGTCCCGGTTTGAACCC GGGCAGAAGCACCA
tRNA-Val	chr6	+	27366384	27366456	GTTTCCGTGGTGTAGTGGTTATCACATTTCGC CTTACACGCGAAAGGTCTCGGGTTCGAAACC

					GAGCGGAAACACCA
tRNA-Gln	chr6	+	27371191	27371262	GGTTCATGGTGTAAATGGTTAGCACTCTGGA CTCTGAATCCGGTAATCCGAGTTCAAATCTC GGTGGAACTCCA
tRNA-Ser	chr6	+	27373754	27373835	GACGAGGTGGCCGAGTGGTTAAGGCGATGG ACTGCTAATCCATTGTGCTCTGCACGCGTGG GTTCAATCCCACCTTCGTCGCCA
tRNA-Thr	chr6	-	27379547	27379618	GGCAGAGTGGTGCAGCGGAAGCGTGCTGG GCCCCGTAACCCAGAGGTCAATGGATCGAAG CCATCCTTGGCTACCA
tRNA-Met	chr6	-	27408743	27408814	AGCAGAGTGGCGCAGCGGAAGCGTGCTGG GCCCCATAACCCAGAGGTGCATGGATCGAAA CCATCCTCTGCTACCA
tRNA-Lys	chr6	-	27410748	27410820	GCCTGGGTAGCTCAGTCGGTAGAGCATCAG ACTTTTAATCTGAGGGTCCAGGGTTCAAGTC CCTGTCCAGGCGCCA
tRNA-Ser	chr6	+	27554570	27554651	GTAGTCGTGGCCGAGTGGTTAAGGCGATGG ACTAGAAATCCATTGGGGTCTCCCCGCGCAG GTTCAATCCTGCCGACTACGCCA
tRNA-Asp	chr6	+	27555432	27555503	TCCTCGTTAGTATAGTGGTGAGTATCCCCGC CTGTCACGCGGGAGACCGGGTTTCGATTCC CCGACGGGGAGCCA
tRNA-Ser	chr6	+	27571572	27571653	GTAGTCGTGGCCGAGTGGTTAAGGCGATGG ACTAGAAATCCATTGGGGTCTCCCCGCGCAG GTTCAATCCTGCCGACTACGCCA
tRNA-Ser	chr6	+	27578797	27578878	GTAGTCGTGGCCGAGTGGTTAAGGCGATGG ACTAGAAATCCATTGGGGTCTCCCCGCGCAG GTTCAATCCTGCCGACTACGCCA
tRNA-Asp	chr6	+	27579502	27579573	TCCTCGTTAGTATAGTGGTGAGTATCCCCGC CTGTCACGCGGGAGACCGGGTTTCGATTCC CCGACGGGGAGCCA
tRNA-Ser	chr6	-	27581586	27581667	GTAGTCGTGGCCGAGTGGTTAAGGCGATGG ACTTGAAATCCATTGGGGTTTCCCCGCGCAG GTTCAATCCTGTGCGCTACGCCA
tRNA-Gln	chr6	+	27595287	27595358	GGTTCATGGTGTAAATGGTTAGCACTCTGGA CTCTGAATCCAGCGATCCGAGTTCAAATCTC GGTGGAACTCCA
tRNA-Ser	chr6	+	27607966	27608047	GTAGTCGTGGCCGAGTGGTTAAGGCGATGG ACTAGAAATCCATTGGGGTTTCCCCACGCAG GTTCAATCCTGCCGACTACGCCA
tRNA-Ser	chr6	-	27617533	27617614	GTAGTCGTGGCCGAGTGGTTAAGGCGATGG ACTAGAAATCCATTGGGGTTTCCCCGCGCAG GTTCAATCCTGCCGACTACGCCA
tRNA-Ser	chr6	+	27621447	27621528	GTAGTCGTGGCCGAGTGGTTAAGGCGATGG ACTTGAAATCCATTGGGGTTTCCCCGCGCAG GTTCAATCCTGCCGACTACGCCA
tRNA-Gln	chr6	-	27623510	27623581	GGTTCATGGTGTAAATGGTTAGCACTCTGGA

					CTCTGAATCCAGCGATCCGAGTTCAAGTCTC GGTGGAACTCCA
tRNA-Ser	chr6	-	27629171	27629252	GTAGTCGTGGCCGAGTGGTTAAGGTGATGG ACTAGAAACCCATTGGGGTCTCCCCGCGCAG GTTCTGAATCCTGCCGACTACGCCA
tRNA-Arg	chr6	+	27637942	27638028	GGCTCTGTGGCGCAATGGATAGCGCATTGG ACTTCTAGCCTAAATCAAGAGATTCAAAGGT TGCGGGTTCGAGTCCCTCCAGAGTCGCCA
tRNA-Lys	chr6	+	27651825	27651897	ACCTGGGTAGCTCAGTAGGTAGAACATCAG ACTTTTAATCTGAGGGTCTAGGGTTCAAGTC CCTGTCCAGGCGCCA
tRNA-Asp	chr6	-	27659215	27659286	TCCTCGTTAGTATAGTGGTGAGTGTCCCCGT CTGTCACGCGGGAGACCGGGTTTCGATTCC CCGACGGGGAGCCA
tRNA-Lys	chr6	-	27667572	27667644	GCCTGGATAGCTCAGTCGGTAGAGCATCAG ACTTTTAATCTGAGGGTCCAGGGTTCAAGTC CCTGTTCAAGGCGCCA
tRNA-Met	chr6	-	27668579	27668650	AGCAGAGTGGCGCAGCGGAAGCGTGCTGG GCCCATAAACCAGAGGTTCGATGGATCGAAA CCATCCTCTGCTACCA
tRNA-Leu	chr6	-	27678327	27678433	GTCAGGATGGCCGAGTGGTCTAAGGCGCCA GACTCAAGTTGCTACTTCCAGGTTTGGGGC TTCTGGTCTCCGCATGGAGGCGTGGGTTCGA ATCCCACTTCTGACACCA
tRNA-Leu	chr6	-	27681396	27681503	GTCAGGATGGCCGAGTGGTCTAAGGCGCCA GACTCAAGCTTACTGCTTCTGTGTTCTGGGT CTTCTGGTCTCCGTATGGAGGCGTGGGTTCG AATCCCACTTCTGACACCA
tRNA-Thr	chr6	+	27694114	27694187	GGCCCTGTAGCTCAGCGGTTGGAGCGCTGG TCTCGTAAACCTAGGGGTCGTGAGTTCAAAT CTCACCAGGGCCTCCA
tRNA-Ile	chr6	+	27707179	27707272	GCTCCAGTGGCGCAATCGGTTAGCGCGCGG TACTTATACAACAGTATATGTGCGGGTGATG CCGAGGTTGTGAGTTCGAGCCTCACCTGGA GCACCA
tRNA-Val	chr6	-	27726686	27726758	GTTTCCGTAGTGTAGTGGTTATCACGTTCCG CTAACACGCGAAAGGTCCCTGGATCAAAACC AGGCGGAAACACCA
tRNA-Phe	chr6	+	27740524	27740599	GCCGAAATAGCTCAATTGGGAGAGTGTTAG ACTGAAGATCTTCTGCAGGTCTCTGGTTCAA TTCCGGGTTTCGACACCA
tRNA-Ile	chr6	+	27744341	27744414	GGCCGGTTAGCTCAGTCGGCTAGAGCGTGG TGCTAATAACGCCAAGGTCGCGGGTTCGATC CCCGTACGGGCCACCA
tRNA-Arg	chr6	-	27746323	27746395	GGGCCAGTGGCGCAATGGATAACGCGTCTG ACTACGGATCAGAAGATTCTAGGTTGCACTC CTGGCTGGCTCGCCA

tRNA-Ser	chr6	-	27748208	27748289	GCTGTGATGGCCGAGTGGTTAAGGTGTTGG ACTCGAAATCCAATGGGGGTTCCCCGCGCAG GTTCAAATCCTGCTCACAGCGCCA
tRNA-Val	chr6	-	27756864	27756936	GTTTCCGTAGTGTAGTGGTTATCACGTTGCG CTAACACGCGAAAGGTCCGCGGTTCGAAAC CGGGCGGAAACACCA
tRNA-Val	chr6	+	27758467	27758540	TTTTCTGTAGTGTAGTTGTTAACACGTTGCGC TCACACGCTTAAAGTTCTCTGGTTGGATACC AGATGGAAATGCCA
tRNA-Thr	chr6	-	27760453	27760526	GGCTCCGTGGCTTAGCTGGTTAAAGCGCCTG TCTAGTAAACAGGAGATCCTGGGTTCGAATC CCAGCGGGGCTCCA
tRNA-Ile	chr6	+	27763946	27764019	GGCCGGTTAGCTCAGTTGGTTAGAGCGTGG TGCTAATAACGCCAAGGTCGCGGGTTCGATC CCCGTACTGGCCACCA
tRNA-Leu	chr6	-	27796877	27796959	ACCGGGATGGCCGAGTGGTTAAGGCGTTGG ACTTAAGATCCAATGGGCTGGTGCCCGCGTG GGTTCGAACCCCACTCTCGGTACCA
tRNA-Thr	chr6	+	27802452	27802525	GGCTTCGTGGCTTAGCTGGTTAAAGCGCCTG TCTAGTAAACAGGAGATCCTGGGTTCGAATC CCAGCGAGGCCTCCA
tRNA-Val	chr6	-	27804306	27804378	GTTTCCGTAGTGTAGTGGTTATTATGTTGCGC TCACACGCGAAAAGTCCCCGGTTCGAAATCA GGCGGGAACACCA
tRNA-Val	chr6	-	27829158	27829230	GTTTCCGTAGTGTAGTGGTTATCACGTTGCG CTAACACGCGAAAGGTCCCCGGTTCGAAACC GGGCGGAAACACCA
tRNA-Met	chr6	+	27853643	27853714	AGCAGAGTGGCGCAGCGGAAGCGTGCTGG GCCCATAAACCAGAGGTGCATGGATCTAAAC CATCCTCTGCTACCA
tRNA-Gln	chr6	-	27867114	27867185	GGCCCCATGGTGTAAATGGTCAGCACTCTGGA CTCTGAATCCAGCGATCCGAGTTCAAATCTC GGTGGGACCCCCA
tRNA-Gln	chr6	-	27871619	27871690	GGCCCCATGGTGTAAATGGTTAGCACTCTGGA CTTTGAATCCAGCGATCCGAGTTCAAATCTC GGTGGGACCTCCA
tRNA-Met	chr6	-	27978250	27978321	AGCAGAGTGGCGCAGCGGAAGCGTGCTGG GCCCATAAACCAGAGGTGCATGGATCGAAA CCATCCTCTGCTACCA
tRNA-Gly	chr6	-	27978665	27978735	GCATTGGTGGTTCAGTGGTAGAATTCTCGCC TGCCACGCGGGAGGCCCGGTTTCGATTCCC GGCCAATGCACCA
tRNA-Ser	chr6	+	28288794	28288875	GACGAGGTGGCCGAGTGGTTAAGGCGATGG ACTGCTAATCCATTGTGCTCTGCACACGTGG GTTTGAATCCCATCCTCGTCGCCA
tRNA-Thr	chr6	-	28550308	28550381	GGCTCTATGGCTTAGTTGGTTAAAGCGCCTG TCTTGTAACAGGAGATCCTGGGTTTCGAATC

					CCAGTAGAGCCTCCA
tRNA-Leu	chr6	-	28554379	28554460	GGTAGCGTGGCCGAGTGGTCTAAGACGCTG GATTAAGGCTCCAGTCTCTTCGGGGGCGTG GGTTTGAATCCCACCGCTGCCACCA
tRNA-Thr	chr6	-	28564749	28564822	GGCTCTATGGCTTAGTTGGTTAAAGCGCCTG TCTCGTAAACAGGAGATCCTGGGTTGCACTC CCAGTGGGGCCTCCA
tRNA-Ile	chr6	+	28613346	28613439	GCTCCAGTGGCGCAATCGGTTAGCGCGCGG TACTTATAAGACAGTGCACCTGTGAGCAATG CCGAGGTTGTGAGTTCAAGCCTCACCTGGAG CACCA
tRNA-Arg	chr6	-	28618870	28618942	GACCACGTGGCCTAATGGATAAGGCGTCTG ACTTCGGATCAGAAGATTGAGGGTTCAATC CCTTCGTGGTTGCCA
tRNA-Gln	chr6	+	28665135	28665206	GGTCCCATGGTGTAAATGGTTAGCACTCTGGA CTTTGAATCCAGCAATCCGAGTTCGAATCTC GGTGGGACCTCCA
tRNA-Ser	chr6	-	28673096	28673177	GACGAGGTGGCCGAGTGGTTAAGGCGATGG ACTGCTAATCCATTGTGCTCTGCACGCGTGG GTTCAATCCCATCCTCGTCGCCA
tRNA-Ala	chr6	+	28682912	28682983	GGGGGTGTAGCTCAGTGGTAGAGCGCGTGC TTAGCATGTACGAGGTCCCGGGTTCAATCCC CGGCACCTCCACCA
tRNA-Ala	chr6	+	28719201	28719272	GGGGATGTAGCTCAGTGGTAGAGCGCATGC TTTGCATGTATGAGGTCCCGGGTTCGATCCC CGGCATCTCCACCA
tRNA-Thr	chr6	-	28723963	28724036	GGCTCTGTGGCTTAGTTGGCTAAAGCGCCTG TCTCGTAAACAGGAGATCCTGGGTTCAATC CCAGCGGGGCCTCCA
tRNA-Ala	chr6	-	28733993	28734064	GGGGATGTAGCTCAGTGGTAGAGCGCATGC TTAGCATGCATGAGGTCCCGGGTTCGATCCC CAGCATCTCCACCA
tRNA-Ala	chr6	-	28749592	28749663	GGGGATGTAGCTCAGTGGTAGAGCGCATGC TTCGCATGTATGAGGCCCGGGTTCGATCCC CGGCATCTCCACCA
tRNA-Ala	chr6	-	28771688	28771759	GGGGGTGTAGATCAGTGGTAGAGCGCATGC TTCGCATGTACGAGGTCCCTGGTTCAATCCC TGGTACCTCCACCA
tRNA-Ala	chr6	+	28786345	28786416	GGGGGTGTAGCTCAGTGGTAGAGCGCGTGC TTAGCATGCACGAGGCCCTGGGTTCAATCCC CAGCACCTCCACCA
tRNA-Ala	chr6	+	28795460	28795531	GGGGGTGTAGCTCAGTGGTAGAGCGCGTGC TTAGCATGCACGAGGCCCGGGTTCGATCCC TGGCACCTCCACCA
tRNA-Thr	chr6	+	28801774	28801847	GGCTCCGTAGCTTAGTTGGTTAAAGCGCCTG TCTAGTAAACAGGAGATCCTGGGTTGCACTC CCAGCGGGGCCTCCA

tRNA-Ala	chr6	+	28805071	28805142	GGGGGTGTAGCTCAGTGGTAGAGCGCGTGC TTCGCATGTACGAGGCCCCGGGTTCGACCCC CGGCTCCTCCACCA
tRNA-Val	chr6	-	28811185	28811256	GGGGGTGTAGCTCAGTGGTAGAGCGTATGC TTAACATTCATGAGGCTCTGGGTTCGATCCC CAGCACTTCCACCA
tRNA-Arg	chr6	-	28818708	28818780	GGCCGCGTGGCCTAATGGATAAGGCGTCTG ATTCCGGATCAGAAGATTGAGGGTTCGAGTC CCTTCGTGGTCGCCA
tRNA-Lys	chr6	+	28823500	28823572	GCCTGGATAGCTCAGTTGGTAGAACATCAGA CTTTTAATCTGACGGTGCAGGGTTCAAGTCC CTGTTCAAGCGCCA
tRNA-Ala	chr6	-	28834120	28834191	GGGGGTGTAGCTCAGTGGTAGAGCACATGC TTTGCATGTGTGAGGCCCCGGGTTCGATCCC CGGCACCTCCACCA
tRNA-Phe	chr6	-	28839353	28839426	GCTGAAATAGCTCAGTTGGGAGAGCGTTAG ACTGAAGATCTTAAAGTCCCTGGTTCAACC CTGGGTTTCAGCCCCA
tRNA-Phe	chr6	+	28840143	28840215	GCCAAAATTGCTCAGTTGGGAGAGCGTTAG ACTGAAGATCTAAAGGTCCCTGGTTCGATCC CGGGTTTCACCACCA
tRNA-Ala	chr6	-	28865526	28865597	GGGGGTGTAGCTCAGTGGTAGAGCGCATGC TTTGCATGTATGAGGTCCCGGTTCGATCCC CGGCACCTCCACCA
tRNA-Phe	chr6	-	28866478	28866550	GCCGAAATAGCTCAGTTGGGAGAGCGTTAG ACTGAAGATCTAAAGGTCCCTGGTTTCGATCC CGGGTTTCGGCACCA
tRNA-Ala	chr6	-	28871720	28871791	GGGGGTATAGCTCAGTGGTAGAGCGCGTGC TTAGCATGCACGAGGTCTGGGTTCGATCCC CAGTACCTCCACCA
tRNA-Ala	chr6	-	28878556	28878626	GGGGGTGTAGCTCAGTGGTAGAGCGCATGC TTTGCATGTATGAGGCCTCGGTTCGATCCCC GACACCTCCACCA
tRNA-Phe	chr6	-	28883589	28883661	GCCGAGATAGCTCAGTTGGGAGAGCGTTAG ACTGAAGATCTAAAGGTCCCTGGTTCAATCC CGGGTTTCGGCACCA
tRNA-Ala	chr6	-	28887828	28887899	GGGGGTATAGCTCAGCGGTAGAGCGCGTGC TTAGCATGCACGAGGTCTGGGTTCATCCC CAATACCTCCACCA
tRNA-Ala	chr6	-	28892991	28893062	GGGGGTGTAGCTCAGTGGTAGAGCGCATGC TTTGCATGTATGAGGCCTCGGTTCGATCCC CGACACCTCCACCA
tRNA-Phe	chr6	-	28899072	28899145	GCCGAAATAGCTCAGTTGGGAGAGCGTTAG ACCGAAGATCTTAAAGGTCCCTGGTTCAATC CCGGGTTTCGGCACCA
tRNA-Ala	chr6	-	28914200	28914271	GGGGGTGTAGCTCAGTGGTAGAGCGCGTGC TTAGCATGCACGAGGCCCCGGGTTCATCCC

					CGGCACCTCCACCA
tRNA-Ala	chr6	-	28939441	28939512	GGGGGTGTAGCTCAGTGGTAGAGCGCGTGC TTAGCATGCACGAGGCCCGGGTTCAATCCC CGGCACCTCCACCA
tRNA-Arg	chr6	+	28957144	28957216	GGCCGCGTGGCCTAATGGATAAGGCGTCTG ATTCCGGATCAGAAGATTGAGGGTTCGAGTC CCTTCGTGGTCGCCA
tRNA-Leu	chr6	-	28971979	28972084	GTCAGGATGGCCGAGTGGTCTAAGGCGCCA GACTCAAGCTAAGCTTCCTCCGCGGTGGGGA TTCTGGTCTCCAATGGAGGCGTGGGTTCGAA TCCCACTTCTGACACCA
tRNA-Leu	chr6	+	29016809	29016913	GTCAGGATGGCCGAGTGGTCTAAGGCGCCA GACTCAAGCTTGGCTTCCTCGTGTTGAGGAT TCTGGTCTCCAATGGAGGCGTGGGTTCGAAT CCCACTTCTGACACCA
tRNA-Gln	chr6	-	29017357	29017428	GGTTCCATGGTGTAAATGGTTAGCACTCTGGA CTCTGAATCCAGCGATCCGAGTTCAAATCTC GGTGAACCTCCA
tRNA-Leu	chr6	-	29019378	29019459	GGTAGCGTGGCCGAGCGGTCTAAGGCGCTG GATTAAGGCTCCAGTCTCTTCGGGGGCGTG GGTTCGAATCCCACCGCTGCCACCA
tRNA-Met	chr6	+	29020331	29020403	GCCTCCTTAGCGCAGTAGGCAGCGCGTCAGT CTCATAATCTGAAGGTCCTGAGTTCGAACCT CAGAGGGGGCACCA
tRNA-Lys	chr6	+	29026785	29026857	GCCCGGATAGCTCAGTCGGTAGAGCATCAG ACTTTTAATCTGAGGGTCCAGGGTTCAAGTC CCTGTTCTGGGCGCCA
tRNA-Met	chr6	-	29029021	29029093	GCCTCCTTAGCGCAGTAGGCAGCGCGTCAGT CTCATAATCTGAAGGTCCTGAGTTCGAACCT CAGAGGGGGCACCA
tRNA-Phe	chr6	-	29057428	29057500	GCCGAAATAGCTCAGTTGGGAGAGCGTTAG ACTGAAGATCTAAAGGTCCCTGGTTCGATCC CGGGTTTCGGCACCA
tRNA-Glu	chr6	+	29057955	29058026	TCCCTGGTGGTCTAGTGGTTAGGATTCGGCG CTCTACCGCCGCGGCCCGGGTTCGATCCC GGTCAGGGAACCA
tRNA-Leu	chr6	+	29064758	29064839	GGTAGCGTGGCCGAGCGGTCTAAGGCGCTG GATTAAGGCTCCAGTCTCTTCGGGGGCGTG GGTTCAAATCCCACCGCTGCCACCA
tRNA-Gln	chr6	+	37395973	37396045	GTGCAGAGTAGTACAGTGGTTAAACCATGG TCTTTGGAGCCAGACTGCCTGGGGTTCGGATC CCAGCTCTCACACCA
tRNA-Ala	chr6	-	58249836	58249908	GGGGAATTAGCTCAAGCGGTAGAGCGCTCC CTTAGCATGCGAGAGGTAGCGGGATCGACG CCCCATTCTCTACCA
tRNA-Ala	chr6	-	58250548	58250620	GGGGGATTAGCTCAAGCGGTAGAGCGCCTG CTTAGCATGCAAGAGGTAGCAGGATCGATG

					CCTGCATTCTCCACCA
tRNA-Ile	chr6	+	58257213	58257286	GGCCGGTTAGCTCAGTTGGTTAGAGCGTGG CGCTAATAACGCCAAGGTCGCGGGTTCGATC CCCGTACGGGCCACCA
tRNA-Ala	chr6	-	58272587	58272659	GGGGAATTAGCTCAAGCGGTAGAGCGCTTG CTTAGCATGCAAGAGGTAGTGGGATCGATG CCCACATTCTCCACCA
tRNA-Met	chr6	-	58276451	58276523	GCCCTCTTAGTGCAGCTGGCAGCGCGTCAGT TTCATAATCTGAAAGTCCTGAGTTCAAGCCTC AGAGAGGGCACCA
tRNA-Ala	chr6	-	58290638	58290710	GGGGAATTAGCTCAAGTGGTAGAGCGCTTG CTTAGCATGCAAGAGGTAGTGGGATCGATG CCCACATTCTCCACCA
tRNA-Ala	chr6	-	58295403	58295475	GGGGAATTAGCGCAAGTGGTAGAGTGCTTG CTTAGCATGCAAGAGGTAGTGGGATCGATG CCCACATTCTCCACCA
tRNA-Ala	chr6	-	58304582	58304654	GGGGAATTAGCCCAAGTGGTAGAGCGCTTG CTTAGCATGCAAGAGGTAGTGGGATCGATG CCCACATTCTCCACCA
tRNA-Leu	chr6	+	69971099	69971181	ACTCATTTGGCTGAGTGGTTAAGGCATTGGA CTTAAGATCCAATGGAGTAGTGGCTGTGTGG GTTTAAACCCCACTACTGGTACCA
tRNA-Glu	chr6	-	126143086	126143157	TCCCTGGTGGTCTAGTGGTTAGGATTCGGCG CTCTACCGCCGCGGCCCGGGTTCGATTCCC GGTCAGGGAACCA
tRNA-Gly	chr6	+	142620469	142620539	GCATGGGTGATTCAAGTGGTAGAATTTTACC TGCCATGCAGGAGGTCCAGGTTCAATTCCTG GCCTATGCACCA
tRNA-Leu	chr6	+	144579377	144579459	ACCAGGATGGCCGAGTGGTTAAGGCGTTGG ACTTAAGATCCAATGGACATATGTCGCGTG GGTTCGAACCCCACTCCTGGTACCA
tRNA-Gln	chr6	+	145545552	145545623	GGTCCCATGGTGTAAATGGTTAGCACTCTGGG CTTTGAATCCAGCAATCCGAGTTCGAATCTT GGTGGGACCTCCA
tRNA-Trp	chr7	+	98905243	98905314	GACCTCGTGGCGCAACGGCAGCGCGTCTGA CTCCAGATCAGAAGGTTGCGTGTTCAAATCA CGTCGGGGTCACCA
tRNA-Pro	chr7	+	128210740	128210811	GGCTCGTTGGTCTAGGGGTATGATTCTCGCT TAGGGTGCGAGAGGTCCCGGGTTCAAATCC CGGACGAGCCCCCA
tRNA-Arg	chr7	+	138675986	138676058	GCCCCAGTGGCCTAATGGATAAGGCATTGG CCTCCTAAGCCAGGGATTGTGGGTTGAGATC CCATCTGGGGTGCCA
tRNA-Cys	chr7	+	148638214	148638285	GGGGGCATAGCTCAGTGGTAGAGCATTTGA CTGCAGATCAAGAGGTCCCTGGTTCAAATCC AGGTGCCCCCTCCA
tRNA-Cys	chr7	+	148659153	148659224	GGGGGTATAGCTCAGGGGTAGAGCATTTGA

					CTGCAGATCAAGAGGTCCCTGGTTCAAATCC AGGTGCCCCCTCCA
tRNA-Cys	chr7	-	148683699	148683770	GGGGGTATAGCTCAGGGGTAGAGCATTTGA CTGCAGATCAAGAGGTCCCCAGTTCAAATCT GGGTGCCCCCTCCA
tRNA-Cys	chr7	-	148703783	148703854	GGGGGTATAGTTCAGGGGTAGAGCATTTGA CTGCAGATCAAGAGGTCCCTGGTTCAAATCC AGGTGCCCCCTCCA
tRNA-Cys	chr7	-	148705534	148705605	GGGGGTATAGCTCAGGGGTAGAGCATTTGA CTGCAGATCAAGAGGTCCCTGGTTCAAATCC AGGTGCCCCCCCCA
tRNA-Cys	chr7	-	148743162	148743233	GGGGGTATAGCTTAGCGGTAGAGCATTTGA CTGCAGATCAAGAGGTCCCCGGTTCAAATCC GGGTGCCCCCTCCA
tRNA-Cys	chr7	+	148874564	148874635	GGGGGTATAGCTCAGGGGTAGAGCACTTGA CTGCAGATCAAGAAGTCCTTGGTTCAAATCC AGGTGCCCCCTCCA
tRNA-Cys	chr7	+	148884735	148884806	GGGCGTATAGCTCAGGGGTAGAGCATTTGA CTGCAGATCAAGAGGTCCCCAGTTCAAATCT GGGTGCCCACTCCA
tRNA-Tyr	chr7	+	148886066	148886138	GGGGGTATAGCTCAGGGCTAGAGCTTTTG ACTGTAGAGCAAGAGGTCCCTGGTTCAAATC CAGGTTCTCCCTCCA
tRNA-Cys	chr7	+	148912749	148912820	GGGGGTATAGCTCAGGGGTAGAGCATTTGA CTGCAGATCAAGAGGTCTCTGGTTCAAATCC AGGTGCCCCCTCCA
tRNA-Cys	chr7	-	148917097	148917168	GGGGGTATAGCTCAGGGGTAGAGCACTTGA CTGCAGATCAAGAGGTCCCTGGTTCAAATCC AGGTGCCCCCTCCA
tRNA-Cys	chr7	-	148923238	148923309	GGGGGTATAGCTCACAGGTAGAGCATTTGA CTGCAGATCAAGAGGTCCCCGGTTCAAATCC GGTTACTCCCTCCA
tRNA-Cys	chr7	+	148925979	148926050	GGGCGTATAGCTCAGGGGTAGAGCATTTGA CTGCAGATCAAGAGGTCCCCAGTTCAAATCT GGGTGCCCCCTCCA
tRNA-Ser	chr7	+	148936400	148936471	GGGTGTATGGCTCAGGGGTAGAGAATTTGA CTAGAGATCAAGAGGTCCCTGGTTCAAATCC AGGTGCCCCCTCCA
tRNA-Cys	chr7	-	148941089	148941160	GGGGGTATAGCTCAGGGGTAGAGCATTTGA CTGCAAATCAAGAGGTCCCTGATTCAAATCC AGGTGCCCCCTCCA
tRNA-Cys	chr7	+	148963711	148963782	GGGGGTATAGCTCAGGGGTAGAGCATTTGA CTGCAGATCAAGAGGTCCCTGGTTCAAATCC AGGTGCCCCCTCCA
tRNA-Cys	chr7	-	148974979	148975050	GGGGGTATAGCTTAGGGGTAGAGCATTTGA CTGCAGATCAAAAGGTCCCTGGTTCAAATCC AGGTGCCCCCTCCA

tRNA-Cys	chr7	+	148992848	148992919	GGGGGTATAGCTCACAGGTAGAGCATTGGA CTGCAGATCAAGAGGTCCCCGGTTCAAATCT GGGTGCCCCCTCCA
tRNA-Cys	chr7	-	149019205	149019276	GGGGATATAGCTCAGGGGTAGAGCATTGGA CTGCAGATCAAGAGGTCCCCGGTTCAAATCC GGGTGCCCCCCCCA
tRNA-Cys	chr7	+	149035693	149035764	GGGGGTATAGCTCAGGGGTAGAGCATTGGA CTGCAGATCAAGAGGTCCCTGGTTCAAATCC AGGTGCCCCCTCCA
tRNA-Lys	chr7_ran- dom	+	397621	397697	GCCACGTAGCTCAATGGTCAGAGCGTGCG GCTTTTAACCGCAAGGAAGGCTGCGAGTTCG ACCCTCGCCGTGGGCTCCA
tRNA-Glu	chr8	+	59667352	59667422	TCCTTGATGTCTAGTGGTTAGGATTTGGTGC TCTCACTGCAGCAGCCTGGGTTCATTTCTCA GTCAGGGAACCA
tRNA-Tyr	chr8	-	66772086	66772173	TCTTCAATAGCTCAGCTGGTAGAGCGGAGG ACTGTAGGTGCACGCCCCGTGGCCATTCTTAG GTGCTGGTTTGATTCCGACTTGGAGAGCCA
tRNA-Tyr	chr8	+	67188156	67188248	CCTTCGATAGCTCAGCTGGTAGAGCGGAGG ACTGTAGCTACTTCCTCAGCAGGAGACATCC TTAGGTCGCTGGTTCGATTCCGGCTCGAAGG ACCA
tRNA-Tyr	chr8	+	67188777	67188865	CCTTCGATAGCTCAGCTGGTAGAGCGGAGG ACTGTAGGCGCGCGCCCGTGGCCATCCTTAG GTCGCTGGTTCGATTCCGGCTCGAAGGACCA
tRNA-Ala	chr8	+	67188978	67189050	GGGGGATTAGCTCAAATGGTAGAGCGCTCG CTTAGCATGCGAGAGGTAGCGGGATCGATG CCCGCATCCTCCACCA
tRNA-Ser	chr8	-	96351061	96351142	GTAGTCGTGGCCGAGTGGTTAAGGCGATGG ACTAGAAATCCATTGGGGTCTCCCCGCGCAG GTTTCAATCCTGCCGACTACGCCA
tRNA-Met	chr8	-	124238651	124238723	GCCTCGTTAGCGCAGTAGGTAGCGCGTCAG TCTCATAATCTGAAGGTCGTGAGTTCGATCC TCACACGGGGCACCA
tRNA-Gln	chr9	-	5085085	5085156	TAGGATATGGTTTAATAGGTAGCATGGAGA ATTTTGGAGTCTCAGGGATAGGTTCAATTCC TATAGTTCCAGCCA
tRNA-His	chr9	-	14423938	14424009	GCCGTGATCGTATAGTGGTTAGTACTCTGCG TTGTGGCCGAGCAACCTCGGTTTCAATCCG AGTCACGGCACCA
tRNA-Met	chr9	+	19393996	19394070	AGCAGAGTGGTGCAGTGGAAGCATACCTAT GGGCCATAAACCAGAGGTTGATGGATGGA AACCATCCTCTGCTACCA
tRNA-Asp	chr9	-	76707810	76707881	TCCTCGTTAGTATGGTGGTGAGTATCCCTGC CTGTCACGCGGGAGACCGGGTTTCGATTCC CCAACGGGGAGCCA
tRNA-Arg	chr9	+	112000624	112000696	GGCCGTGTGGCCTAATGGATAAGGCGTCTG

					ACTTCGGATCAAAAGATTGCAGGTTTGAGTT CTGCCACGGTCGCCA
tRNA-Trp	chr9	+	114656810	114656908	GGCAGAGGAGGGTGCAGTTGGCAGCCTGTC CAAGTCCAGCACGGTTGGAGCACAGGATTT AGAATGGGATGGTCCTGGGTTCAAACCCCA GCTGCGCCCCCA
tRNA-Gln	chr9	-	125695343	125695415	GAGCTGTAGCATAGTGATTAGGGACATGGA CTCTGGAGCCAAATCTGCCTGGGTTCTAGTC CCAGCTGTCTACCA
tRNA-Arg	chr9	-	130142176	130142266	GGCTCTGTGGCGCAATGGATAGCGCATTGG ACTTCTAGCTGAGCCTAGTGTGGTCATTCAA AGGTTGTGGGTTTCGAGTCCCACCAGAGTCG CCA
tRNA-Val	chr10	-	5935680	5935752	GGTTCCATAGTGTAGTGGTTATCACATCTGC TTTACACGCAGAAGGTCCTGGGTTCAAGCCC CAGTGAACCACCA
tRNA-Asn	chr10	-	22558444	22558517	GTCTCTGTGGCGCAATCGGTTAGCGCGTTTCG GCTGTTAACCGAAAGGTTGGTGGTTCGAGCC CACCAGGGACGCCA
tRNA-Ser	chr10	+	69194267	69194348	GCAGCGATGGCCGAGTGGTTAAGGCGTTGG ACTTCAAATCCAATGGGGTCTCCCCGCGCAG GTTCTGAACCCTGCTCGCTGCGCCA
tRNA-Leu	chr11	+	9253366	9253439	GCCTCCTTAGTGCAGTAGGTAGCGCATCAGT CTCAAATCTGAATGGTCTGAGTTCAAGCC TCAGAGGGGGCACCA
tRNA-Trp	chr11	-	45246776	45246849	GGAAGGATGGGGCCAAGCTGGAAGCCTGT GGGCTCCACAGTCATGTGCCTGGGTTCAATT CCCAGTTCTGCATCCA
tRNA-Ala	chr11	-	50190455	50190526	GGGGGTGTAGCTCAGTGGTAGAGCGGATGC TTTGCATGTATGAGACTTTGGGTTGGATCCC CAGCACCTCCACCA
tRNA-Lys	chr11	+	51216476	51216548	AACCGAATAGCTTAGTTGATGAAGCGTGAG ACTCTTAATCTCAGGGTAGTGGGTTCAAGCC CCACATTGGACACCA
tRNA-Val	chr11	-	59074678	59074750	GGTTCCATAGTGTAGTGGTTATCACGTCTGC TTTACACGCAGAAGGTCCTGGGTTTCGAGCCC CAGTGAACCACCA
tRNA-Val	chr11	-	59075036	59075108	GGTTCCATAGTGTAGCGGTTATCACGTCTGC TTTACACGCAGAAGGTCCTGGGTTTCGAGCCC CAGTGAACCACCA
tRNA-Arg	chr11	+	59075343	59075428	GGCTCTGTGGCGCAATGGATAGCGCATTGG ACTTCTAGATAGTTAGAGAAATCAAAGGTT GTGGGTTTCGAGTCCCACCAGAGTCGCCA
tRNA-Leu	chr11	+	59075804	59075886	ACCAGAATGGCCGAGTGGTTAAGGCGTTGG ACTTAAGATCCAATGGATTCATATCCGCGTG GGTTCGAACCCCACTTCTGGTACCA
tRNA-Lys	chr11	+	59080478	59080550	GCCCGGATAGCTCAGTCGGTAGAGCATCAG

					ACTTTTAATCTGAGGGTCCGGGGTTCAAGTC CCTGTTTCGGGCGCCA
tRNA-Phe	chr11	-	59081546	59081618	GCCGAAATAGCTCAGTTGGGAGAGCGTTAG ACTGAAGATCTAAAGGTCCCTGGTTTCGATCC CGGGTTTCGGCACCA
tRNA-Lys	chr11	-	59084384	59084456	GCCCGGATAGCTCAGTCGGTAGAGCATCAG ACTTTTAATCTGAGGGTCCAGGGTTCAAGTC CCTGTTTCGGGCGCCA
tRNA-Phe	chr11	-	59090429	59090501	GCCGAAATAGCTCAGTTGGGAGAGCGTTAG ACTGAAGATCTAAAGGTCCCTGGTTCAATCC CGGGTTTCGGCACCA
tRNA-Ser	chr11	+	65872167	65872248	GACGAGGTGGCCGAGTGGTTAAGGCGATGG ACTGCTAATCCATTGTGCTTTCACGCGTGG GTTCTGAATCCCATCCTCGTCGCCA
tRNA-Pro	chr11	+	75624205	75624276	GGCTCGTTGGTCTAGGGGTATGATTCTCGCT TAGGGTGCGAGAGGTCCCGGGTTCAAATCC CGGACGAGCCCCCA
tRNA-Pro	chr11	-	75624517	75624588	GGCTCGTTGGTCTAGGGGTATGATTCTCGGT TTGGGTCCGAGAGGTCCCGGGTTCAAATCCC GGACGAGCCCCCA
tRNA-Ser	chr11	+	108541249	108541330	TGAGTTGTAGCTGAGTGGTTAAGGCAACGA GCTAGAAATTCGTTGGTTTCTCTCTGTGCAG GTTTGAATCCTGCTAATTATGCCA
tRNA-Lys	chr11	+	121935865	121935937	GCCTGGATAGCTCAGTTGGTAGAGCATCAG ACTTTTAATCTGAGGGTCCAGGGTTCAAGTC CCTGTTTCAGGCGCCA
tRNA-Lys	chr12	+	27734573	27734645	ACCCAGATAGCTCAGTCAGTAGAGCATCAGA CTTTTAATCTGAGGGTCCAAGGTTTCATGTCC CTTTTTGGGTGCCA
tRNA-Ser	chr12	+	54870415	54870496	GTCACGGTGGCCGAGTGGTTAAGGCGTTGG ACTCGAAATCCAATGGGGTTTCCCCGCACAG GTTCTGAATCCTGTTCTGTACGCCA
tRNA-Gln	chr12	+	73137449	73137521	GGTTCCATGGTGTAAATGGTAAGCACCTGGA CTCTGAATCCAGCAACCAGAGTTCCAGTCTC AGCGTGGACCTCCA
tRNA-Asp	chr12	+	94953930	94954001	TCCTCGTTAGTATAGTGGTGAGTATCCCCGC CTGTCACGCGGGAGACCGGGTTTCGATTCC CCGACGGGGAGCCA
tRNA-Asp	chr12	+	97421412	97421483	TCCTCGTTAGTATAGTGGTTAGTATCCCCGCC TGTCACGCGGGAGACCGGGTTCAATTCCCC GACGGGGAGCCA
tRNA-Trp	chr12	+	97422161	97422232	GACCTCGTGGCGCAACGGTAGCGGTCTGA CTCCAGATCAGAAGGCTGCGTGTTCGAATCA CGTCGGGGTACCA
tRNA-Asp	chr12	+	121426877	121426947	TCCTTGTTAGTATAGTGGTGAGTGTCTGCC TGTCATGTGGAGACTGGAGTTTGAGTCCCCA ACAGGGAGCCA

tRNA-Ala	chr12	-	123972254	123972325	GGGGATGTAGCTCAGTGGTAGAGCGCATGC TTTGCATGTATGAGGCCCCGGGTTCGATCCC CGGCATCTCCACCA
tRNA-Asp	chr12	-	123977844	123977915	TCCTCGTTAGTATAGTGGTGAGTATCCCCGC CTGTCACGCGGGAGACCGGGTTCGATTCC CCGACGGGGAGCCA
tRNA-Phe	chr12	-	123978342	123978414	GCCGAAATAGCTCAGTTGGGAGAGCGTTAG ACTGAAGATCTAAAGGTCCCTGGTTCGATCC CGGGTTTCGGCACCA
tRNA-Asp	chr12	-	123990146	123990217	TCCTCGTTAGTATAGTGGTGAGTATCCCCGC CTGTCACGCGGGAGACCGGGTTCGATTCC CCGACGGGGAGCCA
tRNA-Ala	chr12	+	123990465	123990536	GGGGATGTAGCTCAGTGGTAGAGCGCATGC TTTGACGTATGAGGCCCCGGGTTCATCCC CGGCATCTCCACCA
tRNA-Asn	chr13	-	30146101	30146174	GTCTCTGTGGCGCAATCGGTTAGCGCGTTTCG GCTGTTAACCGAAAGGTTGGTGGTTCGAGCC CACCCAGGGACGCCA
tRNA-Glu	chr13	-	40532874	40532945	TCCCATATGGTCTAGCGGTTAGGATTCCTGG TTTTACCCAGGTGGCCCGGGTTCGACTCCC GGTATGGGAACCA
tRNA-Glu	chr13	-	40928061	40928132	CCCCTGGTGGTCTAGTGCTTAGGATTCGGTG CTCTACCGCTGCTGCCTGCGTTCGATTCCCG GTCAGGGAACCA
tRNA-Glu	chr13	-	44390062	44390133	TCCCATATGGTCTAGCGGTTAGGATTCCTGG TTTTACCCAGGCGGCCCGGGTTCGACTCCC GGTGTGGGAACCA
tRNA-Phe	chr13	-	93999905	93999977	GCCGAAATAGCTCAGTTGGGAGAGCGTTAG ACTGAAGATCTAAAGGTCCCTGGTTCGATCC CGGGTTTCGGCACCA
tRNA-Pro	chr14	-	20147335	20147406	GGCTCGTTGGTCTAGGGGTATGATTCTCGCT TAGGGTGCGAGAGGTCCCGGGTTCAAATCC CGGACGAGCCCCCA
tRNA-Leu	chr14	+	20148131	20148212	GGTAGCGTGGCCGAGCGGTCTAAGGCGCTG GATTAAGGCTCCAGTCTCTTCGGGGGCGTG GGTTCGAATCCCACCGCTGCCACCA
tRNA-Pro	chr14	-	20151400	20151471	GGCTCGTTGGTCTAGGGGTATGATTCTCGCT TAGGGTGCGAGAGGTCCCGGGTTCAAATCC CGGACGAGCCCCCA
tRNA-Thr	chr14	-	20151789	20151861	GGCTCCATAGCTCAGGGGTTAGAGCGCTGG TCTTGTAACCAAGGGTTCGCGAGTTCAATTC TCGCTGGGGCCTCCA
tRNA-Leu	chr14	+	20163369	20163450	GGTAGTGTGGCCGAGCGGTCTAAGGCGCTG GATTTAGGCTCCAGTCTCTTCGGGGGCGTGG GTTTCGAATCCCACCACTGCCACCA
tRNA-Thr	chr14	-	20169159	20169231	GGCTCCATAGCTCAGGGGTTAGAGCACTGG TCTTGTAACCAAGGGTTCGCGAGTTCAAATC

					TCGCTGGGGCCTCCA
tRNA-Pro	chr14	+	20171005	20171076	GGCTCGTTGGTCTAGTGGTATGATTCTCGCT TTGGGTGCGAGAGGTCCCGGGTTCAAATCC CGGACGAGCCCCCA
tRNA-Tyr	chr14	-	20191098	20191191	CCTTCGATAGCTCAGCTGGTAGAGCGGAGG ACTGTAGCCTGTAGAAACATTTGTGGACATC CTTAGGTCGCTGGTTCGATTCCGGCTCGAAG GACCA
tRNA-Tyr	chr14	-	20195463	20195556	CCTTCGATAGCTCAGCTGGTAGAGCGGAGG ACTGTAGATTGTATAGACATTTGCGGACATC CTTAGGTCGCTGGTTCGATTCCAGCTCGAAG GACCA
tRNA-Tyr	chr14	-	20197957	20198050	CCTTCGATAGCTCAGCTGGTAGAGCGGAGG ACTGTAGACTGCGGAAACGTTTGTGGACATC CTTAGGTCGCTGGTTCGATTCCGGCTCGAAG GACCA
tRNA-Tyr	chr14	-	20201191	20201284	CCTTCGATAGCTCAGCTGGTAGAGCGGAGG ACTGTAGATTGTACAGACATTTGCGGACATC CTTAGGTCGCTGGTTCGATTCCGGCTCGAAG GACCA
tRNA-Thr	chr14	+	20219689	20219761	GGCCCTATAGCTCAGGGGTTAGAGCACTGG TCTTGTAACCAGGGGTCGCGAGTTCAAATC TCGCTGGGGCCTCCA
tRNA-Tyr	chr14	+	20221272	20221360	CCTTCGATAGCTCAGCTGGTAGAGCGGAGG ACTGTAGACTTAATGTGTGGTCATCCTTAG GTCGCTGGTTCGATTCCGGCTCGAAGGACCA
tRNA-Pro	chr14	+	20222015	20222086	GGCTCGTTGGTCTAGGGGTATGATTCTCGCT TTGGGTGCGAGAGGTCCCGGGTTCAAATCC CGGACGAGCCCCCA
tRNA-Arg	chr14	+	22468750	22468822	GGGCCAGTGGCGCAATGGATAACGCGTCTG ACTACGGATCAGAAGATTCCAGGTTGCACTC CTGGCTGGCTCGCCA
tRNA-Glu	chr14	-	31306567	31306637	ACCCTGTGGTCTAGTGGCTAAGACTTTGTGC TTTCATTGCTGCATCCTAGGTTCAATCCCAG TCAGGGAACCA
tRNA-Lys	chr14	-	57776366	57776438	GCCCGGCTAGCTCAGTCGGTAGAGCATGGG ACTCTTAATCCCAGGGTCGTGGGTTGAGCC CCACGTTGGGCGCCA
tRNA-Cys	chr14	+	72499432	72499503	GGGGGTATAGCTCAGGGGTAGAGCATTTGA CTGCAGATCAAGAGGTCCCCGGTTCAAATCC GGGTGCCCCCTCCA
tRNA-Ala	chr14	+	88515195	88515267	GGGGAATTAGCTCAAGTGGTAGAGCGCTCG CTTAGCATGCGAGAGGTAGTGGGATCGATG CCCGCATTCTCCACCA
tRNA-Ile	chr14	+	101853182	101853255	GGCCGGTTAGCTCAGTTGGTTAGAGCGTGG TGCTAATAACGCCAAGTTCGCGGGTTCGATC CCCGTACGGGCCACCA

tRNA-Glu	chr15	-	23878474	23878545	TCCCACATGGTCTAGCGGTTAGGATTCCTGG TTTTACCCAGGCGGCCCGGGTTCGACTCCC GGTGTGGGAACCA
tRNA-Ser	chr15	-	38673315	38673396	GACGAGGTGGCCGAGTGGTTAAGGCGATGG ACTGCTAATCCATTGTGCTCTGCACGCGTGG GTTCTGAATCCCATCCTCGTCGCCA
tRNA-His	chr15	-	43278096	43278167	GCCGTGATCGTATAGTGGTTAGTACTCTGCG TTGTGGCCGCAGCAACCTCGGTTCTGAATCCG AGTCACGGCACCA
tRNA-His	chr15	-	43279903	43279974	GCCGTGATCGTATAGTGGTTAGTACTCTGCG TTGTGGCCGCAGCAACCTCGGTTCTGAATCCG AGTCACGGCACCA
tRNA-His	chr15	+	43280641	43280712	GCCGTGATCGTATAGTGGTTAGTACTCTGCG TTGTGGCCGCAGCAACCTCGGTTCTGAATCCG AGTCACGGCACCA
tRNA-Gln	chr15	-	63948454	63948525	GGTTCCATGGTGTAAATGGTTAGCACTCTGGA CTCTGAATCCAGCGATCCGAGTTCAAATCTC GGTGGAACCTCCA
tRNA-Lys	chr15	+	76939959	76940031	GCCCGGCTAGCTCAGTCGGTAGAGCATGGG ACTCTTAATCCCAGGGTCGTGGGTTTCGAGCC CCACGTTGGGCGCCA
tRNA-Cys	chr15	+	77824052	77824124	GGGGGTATAGCTCAGTGGGTAGAGCATTG ACTGCAGATCAAGAGGTCCCCGGTTCAAATC CGGGTGCCCCCTCCA
tRNA-Arg	chr15	+	87679308	87679380	GGCCGCGTGGCCTAATGGATAAGGCGTCTG ACTTCGGATCAGAAGATTGCAGGTTTCGAGTC CTGCCGCGGTCGCCA
tRNA-Gly	chr16	-	626737	626807	GCGCCGCTGGTGTAGTGGTATCATGCAAGAT TCCATTCTTGCGACCCGGGTTTCGATTCCCG GGCGGCGCACCA
tRNA-Arg	chr16	+	3140676	3140748	GGCCGCGTGGCCTAATGGATAAGGCGTCTG ATTCCGGATCAGAAGATTGAGGGTTTCGAGTC CCTTCGTGGTCGCCA
tRNA-Arg	chr16	+	3142902	3142974	GCCCCGGTGGCCTAATGGATAAGGCATTGG CCTCCTAAGCCAGGGATTGTGGGTTTCGAGTC CCACCCGGGGTACCA
tRNA-Lys	chr16	-	3147407	3147479	GCCCGGCTAGCTCAGTCGGTAGAGCATGAG ACCCTTAATCTCAGGGTCGTGGGTTTCGAGCC CCACGTTGGGCGCCA
tRNA-Pro	chr16	+	3148924	3148995	GGCTCGTTGGTCTAGGGGTATGATTCTCGCT TTGGGTGCGAGAGGTCCCGGGTTCAAATCC CGGACGAGCCCCCA
tRNA-Pro	chr16	+	3150387	3150481	GGCTCGTTGGTCTAGGGGTGTGGTTCTCGCT TAGGGACCACAGGGACAAGCCCGGGAGACC CAAGAGGTCCCGGGTTCAAATCCCGGACGA GCCCCCA
tRNA-Lys	chr16	+	3154940	3155012	GCCTGGCTAGCTCAGTCGGCAAAGCATGAG

					ACTCTTAATCTCAGGGTCGTGGGCTCGAGCT CCATGTTGGGCGCCA
tRNA-Pro	chr16	+	3162050	3162121	GGCTCGTTGGTCTAGGGGTATGATTCTCGCT TCGGGTGCGAGAGGTCCCGGGTTCAAATCC CGGACGAGCCCCCA
tRNA-Lys	chr16	+	3165693	3165765	GCCCGGCTAGCTCAGTCGGTAGAGCATGAG ACTCTTAATCTCAGGGTCGTGGGTTTCGAGCC CCACGTTGGGCGCCA
tRNA-Lys	chr16	-	3170556	3170628	GCCCGGCTAGCTCAGTCGATAGAGCATGAG ACTCTTAATCTCAGGGTCGTGGGTTTCGAGCC GCACGTTGGGCGCCA
tRNA-Pro	chr16	-	3172636	3172707	GGCTCGTTGGTCTAGGGGTATGATTCTCGCT TAGGGTGCGAGAGGTCCCGGGTTCAAATCC CGGACGAGCCCCCA
tRNA-Pro	chr16	-	3174134	3174205	GGCTCGTTGGTCTAGGGGTATGATTCTCGCT TTGGGTGCGAGAGGTCCCGGGTTCAAATCC CGGACGAGCCCCCA
tRNA-Pro	chr16	+	3178095	3178166	GGCTCGTTGGTCTAGGGGTATGATTCTCGCT TTGGGTGCGAGAGGTCCCGGGTTCAAATCC CGGACGAGCCCCCA
tRNA-Pro	chr16	+	3179635	3179706	GGCTCGTTGGTCTAGGGGTATGATTCTCGCT TAGGGTGCGAGAGGTCCCGGGTTCAAATCC CGGACGAGCCCCCA
tRNA-Lys	chr16	+	3181502	3181574	GCCCGGCTAGCTCAGTCGGTAGAGCATGGG ACTCTTAATCTCAGGGTCGTGGGTTTCGAGCC CCACGTTGGGCGCCA
tRNA-Pro	chr16	+	3181990	3182061	GGCTCGTTGGTCTAGGGGTATGATTCTCGCT TAGGATGCGAGAGGTCCCGGGTTCAAATCC CGGACGAGCCCCCA
tRNA-Arg	chr16	+	3183919	3183991	GCCCCAGTGGCCTGATGGATAAGGTACTGG CCTCCTAAGCCAGGGATTGTGGGTTTCGAGTT CCACCTGGGGTACCA
tRNA-Gln	chr16	+	3359814	3359885	TAGGACTTGGTGTAATGGGTAGCACAGAGA ATTTTGGATTCTCAGGGGTGGGTTCAATTCC TTTCGTCCTAGCCA
tRNA-Thr	chr16	+	14287251	14287322	GGCGCGGTGGCCAAGTGTAAGGCGTCGGT CTCGTAAACCGAAGATCACGGGTTCGAACCC CGTCCGTGCCTCCA
tRNA-Leu	chr16	-	22114533	22114614	GGTAGCGTGGCCGAGTGGTCTAAGGCGCTG GATTTAGGCTCCAGTCATTTTCGATGGCGTGG GTTTCGAATCCCACCGCTGCCACCA
tRNA-Leu	chr16	+	22215962	22216043	GGTAGCGTGGCCGAGCGGTCTAAGGCGCTG GATTAAGGCTCCAGTCTCTTCGGGGGCGTG GGTTCGAATCCCACCGCTGCCACCA
tRNA-Leu	chr16	+	55891364	55891446	GTCAGGATGGCCGAGCGGTCTAAGGCGCTG CGTTCAGGTCGCAGTCTCCCTGGAGGCGTG GGTTCGAATCCCATTCTGACACCA

tRNA-Leu	chr16	-	55891893	55891975	GTCAGGATGGCCGAGCGGTCTAAGGCGCTG CGTTCAGGTCGCAGTCTCCCTGGAGGCGTG GGTTCGAATCCCACTTCTGACACCA
tRNA-Gly	chr16	-	69369615	69369685	GCATTGGTGGTTCAGTGGTAGAATTCTCGCC TGCCACGCGGGAGGCCCGGGTTTGATTCCC GGCCAGTGCACCA
tRNA-Gly	chr16	-	69370443	69370513	GCATTGGTGGTTCAGTGGTAGAATTCTCGCC TGCCACGCGGGAGGCCCGGGTTGATTCCC GGCCAATGCACCA
tRNA-Gly	chr16	+	69380098	69380168	GCATTGGTGGTTCAGTGGTAGAATTCTCGCC TGCCATGCGGGCGGCCGGGCTTCGATTCTG GCCAATGCACCA
tRNA-Gly	chr16	+	69380911	69380981	GCATTGGTGGTTCAGTGGTAGAATTCTCGCC TGCCACGCGGGAGGCCCGGGTTGATTCCC GGCCAATGCACCA
tRNA-Met	chr16	+	70017897	70017969	GCCCTCTTAGCGCAGTGGGCAGCGCGTCAG TCTCATAATCTGAAGGTCTGAGTTCGAGCC TCAGAGAGGGCACCA
tRNA-Gln	chr16	+	70282391	70282464	GGCAGTATGGTAGAGTGGTTAAGATCATGA ACTCTGAAGTCAGAGATACTTGAATTTGAAT GCTGGTTCTGTCACCA
tRNA-Lys	chr16	-	72069717	72069789	GCCTGGATAGCTCAGTTGGTAGAGCATCAG ACTTTTAATCTGAGGGTCCAGGGTTCAAGTC CCTGTTCAAGCACCA
tRNA-Met	chr16	-	85975129	85975201	GCCTCGTTAGCGCAGTAGGCAGCGCGTCAG TCTCATAATCTGAAGGTCTGAGTTCGAGCC TCACACGGGGCACCA
tRNA-Lys	chr17	+	7963198	7963270	GGCCGGATAGCTCAGTCGGTAGAGCATCAG ACTTTTAATCTGAGGGTCCAGGGTTCAAGTC CCTGTTCCGGGCGCCA
tRNA-Gln	chr17	+	7963795	7963866	GGTTCCATGGTGTAAATGGTTAGCACTCTGGA CTCTGAATCCAGCGATCCGAGTTCAAATCTC GGTGAACCTCCA
tRNA-Leu	chr17	-	7964357	7964438	GGTAGCGTGGCCGAGCGGTCTAAGGCGCTG GATTTAGGCTCCAGTCTCTTCGGAGGCGTGG GTTTCAATCCCACCGCTGCCACCA
tRNA-Arg	chr17	+	7964968	7965055	GGCTCTGTGGCGCAATGGATAGCGCATTGG ACTTCTAGTGACGAATAGAGCAATTCAAAGG TTGTGGGTTCGAATCCCACAGAGTCGCCA
tRNA-Gly	chr17	+	7969789	7969859	GCATTGGTGGTTCAGTGGTAGAATTCTCGCC TGCCACGCGGGAGGCCCGGGTTGATTCCC GGCCAATGCACCA
tRNA-Ser	chr17	-	7982924	7983005	GCTGTGATGGCCGAGTGGTTAAGGCGTTGG ACTCGAAATCCAATGGGGTCTCCCCGCGCAG GTTTCAATCCTGCTCACAGCGCCA
tRNA-Thr	chr17	-	7983495	7983568	GGCGCCGTGGCTTAGCTGGTTAAAGCGCCT GTCTAGTAAACAGGAGATCCTGGGTTCGAAT

					CCCAGCGGTGCCTCCA
tRNA-Trp	chr17	+	8030401	8030472	GACCTCGTGGCGCAACGGTAGCGCGTCTGA CTCCAGATCAGAAGGTTGCGTGTTCAAATCA CGTCGGGGTCACCA
tRNA-Ser	chr17	+	8030909	8030990	GACGAGGTGGCCGAGTGGTTAAGGCGATGG ACTGCTAATCCATTGTGCTCTGCACGCGTGG GTTCAATCCCATCCTCGTCGCCA
tRNA-Thr	chr17	+	8031203	8031276	GGCGCCGTGGCTTAGTTGGTTAAAGCGCCT GTCTAGTAAACAGGAGATCCTGGGTTCGAAT CCCAGCGGTGCCTCCA
tRNA-Ile	chr17	+	8031636	8031709	GGCCGGTTAGCTCAGTTGGTTAGAGCGTGG TGCTAATAACGCCAAGGTCGCGGGTTCGATC CCCGTACGGGCCACCA
tRNA-Trp	chr17	-	8064912	8064983	GGCCTCGTGGCGCAACGGTAGCGCGTCTGA CTCCAGATCAGAAGGTTGCGTGTTCAAATCA CGTCGGGGTCACCA
tRNA-Gly	chr17	+	8065591	8065662	GCGTTGGTGGTATAGTGGTAAGCATAGCTG CCTTCCAAGCAGTTGACCCGGGTTGATTCC CGGCCAACGCACCA
tRNA-Asp	chr17	-	8066281	8066352	TCCTCGTTAGTATAGTGGTGAGTATCCCCGC CTGTCACGCGGGAGACCGGGTTCGATTCC CCGACGGGGAGCCA
tRNA-Pro	chr17	-	8066876	8066947	GGCTCGTTGGTCTAGGGGTATGATTCTCGCT TCGGGTGCGAGAGGTCCCGGGTTCAAATCC CGGACGAGCCCCCA
tRNA-Thr	chr17	-	8070278	8070351	GGCGCCGTGGCTTAGTTGGTTAAAGCGCCT GTCTAGTAAACAGGAGATCCTGGGTTCGAAT CCCAGCGGTGCCTCCA
tRNA-Ser	chr17	-	8070653	8070734	GTAGTCGTGGCCGAGTGGTTAAGGCGATGG ACTAGAAATCCATTGGGGTCTCCCCGCGCAG GTTCAATCCTGCCGACTACGCCA
tRNA-Ile	chr17	-	8071034	8071107	GGCCGGTTAGCTCAGTTGGTTAGAGCGTGG TGCTAATAACGCCAAGGTCGCGGGTTCGAAC CCCGTACGGGCCACCA
tRNA-Sup	chr17	+	15349410	15349483	GGCAGTGACGCCTACTGGTTTAGAGCACAG ATTCTAGATCGAGACATTCTGGGTTCAAAT CCCAGCACTGTTGCCA
tRNA-Trp	chr17	+	19352086	19352157	GACCTCGTGGCGCAATGGTAGCGCGTCTGA CTCCAGATCAGAAGGTTGCGTGTTCAAGTCA CGTCGGGGTCACCA
tRNA-Gly	chr17	+	19704767	19704837	GCATTGGTGGTTCAATGGTAGAATTCTCGCC TCCACGCAGGAGACCCAGGTTGATTCTCTG GCCAATGCACCA
tRNA-Thr	chr17	+	26901213	26901284	GGCGCGGTGGCCAAGTGGTAAGGCGTCGGT CTCGTAAACCGAAGATCGCGGGTTCGAACCC CGTCCGTGCCTCCA
tRNA-Asn	chr17	-	34161560	34161633	GTCTCTGTGGCGCAATCGGTTAGCGCGTTTCG

					GCTGTTAACCGAAAGGTTGGTGGTTCGAGCC CACCCAGGGACGCCA
tRNA-Cys	chr17	-	34243501	34243572	GGGGGTAGGGCTCAGGGATAGAGCATTTGA CTGCAGATCAAGAGGTCCCCGGTTCGAATCT AGGTGCCCCCTCCA
tRNA-Cys	chr17	-	34271463	34271534	GGGGGTATAGCTCAGGGGTAGAGCATTTGA CTGCAGATCAAGAAGTCCCCGGTTCAAATCC GGGTGCCCCCTCCA
tRNA-Cys	chr17	+	34277424	34277495	GGGGGTATAGCTCAGTGGTAGAGCATTTGA CTGCAGATCAAGAGGTCCCCGGTTCAAATCC GGGTGCCCCCTCCA
tRNA-Cys	chr17	-	34279071	34279142	GGGGGTATAGCTCAGTGGTAGAGCATTTGA CTGCAGATCAAGAGGTCCCTGGTTCAAATCC GGGTGCCCCCTCCA
tRNA-Cys	chr17	-	34563513	34563584	GGGGGTATAGCTCAGTGGTAGAGCATTTGA CTGCAGATCAAGAGGTCCCCGGTTCAAATCC GGGTGCCCCCTCCA
tRNA-Cys	chr17	-	34564270	34564341	GGGGGTATAGCTCAGTGGTAGAGCATTTGA CTGCAGATCAAGAGGTCCCCGGTTCAAATCC GGGTGCCCCCTCCA
tRNA-Sec	chr17	-	35527079	35527152	GACCGTGTGGCCTTAATGGATAAGGTGTCTG ACTTCAGATCAGAAGATTGAGGGTTTGAGTC CCTTTGTGGTCACCA
tRNA-Gln	chr17	+	44624889	44624960	GGTCCCATGGTGTAAATGGTTAGCACTCTGGA CTTTGAATCCAGCGATCCGAGTTCAAATCTC GGTGGGACCTCCA
tRNA-Sup	chr17	+	56218375	56218445	GCCCGGATAGTTCAGTTGGTAGAGCATCAG ACTTAATCAGAGGGTCCAGGGTTCAAGTCCC TGTTTGGGTGCCA
tRNA-Thr	chr17	-	59957380	59957453	AGCACCATGGCTTAGCTGGTTAAAGCACCTG TCTAGTAAACAGGAGATCCTGAGTTTCAATT CCAATGGTGCCTCCA
tRNA-Arg	chr17	-	63446475	63446547	GACCCAGTGGCCTAATGGATAAGGCATCAG CCTCCGAGCTGGGGATTGTGGGTTTCGAGT CCCATCTGGGTCGCCA
tRNA-Arg	chr17	+	70541596	70541668	GCCCCAGTGGCCTAATGGATAAGGCACTGG CCTCCTAAGCCAGGGATTGTGGGTTTCGAGTC CCACCTGGGGTACCA
tRNA-Arg	chr17	-	70542121	70542193	GCCCCAGTGGCCTAATGGATAAGGCACTGG CCTCCTAAGCCAGGGATTGTGGGTTTCGAGTC CCACCTGGGGTGCCA
tRNA-Arg	chr17	+	70542803	70542875	GACCGGTGGCCTAATGGATAAGGCGTCTG ACTTCGATCAGAAGATTGAGGGTTTCGAGTC CCTTCGTGGTCGCCA
tRNA-Met	chr17	-	78045886	78045957	AGCAGAGTGGCGCAGCGGAAGCGTGCTGG GCCATAACCCAGAGGTTCGATGGATCGAAA CCATCCTCTGCTACCA

tRNA-Arg	chr17_r andom	+	1739927	1739999	GACCCAGTGGCCTAATGGATAAGGCATCAG CCTCCGGAGCTGGGGATTGTGGGTTTCGAGT CCCATCTGGGTCGCCA
tRNA-Glu	chr18	+	41553749	41553820	CCCCGGGTGGTGTAGTGGATGGGATTTGGC GCTCTCACCACCATGGCCCCGATTGTGATCCC GGTCAGGGAACCA
tRNA-Lys	chr18	-	41923269	41923341	GACGAGCTAGCTCAGTCGGTAGAGCATGGG ACTCTTAATCCCAGGGTCGTGGGTTTGAGCC CCATGTTGGGCACCA
tRNA-Phe	chr19	-	1334361	1334433	GCCGAAATAGCTCAGTTGGGAGAGCGTTAG ACTGAAGATCTAAAGGTCCCTGGTTCGATCC CGGGTTTCGGCACCA
tRNA-Asn	chr19	+	1334562	1334635	GTCTCTGTGGCGCAATCGGTTAGCGCGTTTCG GCTGTTAACCGAAAGGTTGGTGGTTCGAGCC CACCCAGGGACGCCA
tRNA-Gly	chr19	+	4675082	4675153	GCGTTGGTGGTATAGTGGTTAGCATAGCTGC CTTCCAAGCAGTTGACCCGGGTTTCGATCCC GGCCAACGCACCA
tRNA-Val	chr19	-	4675647	4675719	GTTTCCGTAGTGTAGCGGTTATCACATTTCGC CTCACACGCGAAAGGTCCCCGGTTCGATCCC GGGCGGAAACACCA
tRNA-Lys	chr19	+	19713207	19713277	ACCCTGTGGTACAGGGGCTAATATGCTGGG CCTTTACCACTTCAGCCAGGTTTCGATTCCTG GTCAGGGAACCA
tRNA-Thr	chr19	+	38359803	38359876	GGCGCCGTGGCTTAGTTGGTTAAAGCGCCT GTCTAGTAAACAGGAGATCCTGGGTTTCGAAT CCCAGCGGTGCCTCCA
tRNA-Lys	chr19	+	40758590	40758662	GCCCAGCTAGCTCAGTCGGTAGAGCATAAG ACTCTTAATCTCAGGGTTGTGGATTTCGTGCC CCATGCTGGGTGCCA
tRNA-Ile	chr19	-	44594648	44594740	GCTCCAGTGGCGCAATCGGTTAGCGCGCGG TACTTATATGACAGTGCGAGCGGAGCAATGC CGAGGTTGTGAGTTCGATCCTCACCTGGAGC ACCA
tRNA-Sec	chr19	-	50673699	50673785	GCCCGGATGATCCTCAGTGGTCTGGGGTGC AGGCTTCAAACCTGTAGCTGTCTAGCGACAG AGTGGTTCAATTCCACCTTTCGGGCGCCA
tRNA-Lys	chr19	-	54729745	54729817	ACCTGGGTAGCTTAGTTGGTAGAGCATTGGA CTTTTAATTTGAGGGCCAGGTTTCAAGTCC CTGTTTGGGTGCCA
tRNA-Lys	chr19	-	57117208	57117280	CTGCAGCTAGCTCAGTCGGTAGAGCATGAG ACTCTTAATCTCAGGGTCATGGGTTTCGTGCC CCATGTTGGGTGCCA
tRNA-Gln	chr20	+	17803142	17803219	GGCAGTGTAGCCAGAGGTTCAAGGGCATT CGCTCTGGTATCAGAAGGGTCTGGGTTCAAA TCCCTTGCACTGCTTCCA
tRNA-Leu	chr20	-	48385749	48385830	GGTAGGGTGGCCGAGCGGTCTAAGGCACTG

					TATTAAGACTCCAGTCTCTTCAGAGGCATGG GTTTGAATCCCACTGCTGCCACCA
tRNA-Sup	chr21	+	14848387	14848457	GGCAGTGACATGTAATGGTTATGAGGGTGG ACTTTAACCACACTGCCTAGGTTCAAATCCTG ACTCTGTCACCA
tRNA-Gly	chr21	-	17748978	17749048	GCATGGGTGGTTCAGTGGTAGAATTCTCGCC TGCCACGCGGGAGGCCCGGGTTCGATTCCC GGCCCATGCACCA
tRNA-Sec	chr22	+	42877870	42877955	GCTCGGATGATCCTCAGTGGTCTGGGGTGC AGGCTTCAAACCTGTAGCTGTCTAGTGACAG AGTGGTTCAATTCCACCTTTGTAGGCCA
tRNA-Ile	chrX	-	3766418	3766491	GGCCGGTTAGCTCAGTTGGTAAGAGCGTGG TGCTGATAACACCAAGGTCGCGGGCTCGACT CCCGCACCGGCCACCA
tRNA-Ile	chrX	-	3804842	3804915	GGCCGGTTAGCTCAGTTGGTAAGAGCGTGG TGCTGATAACACCAAGGTCGCGGGCTCGACT CCCGCACCGGCCACCA
tRNA-Ile	chrX	-	3843271	3843344	GGCCGGTTAGCTCAGTTGGTAAGAGCGTGG TGCTGATAACACCAAGGTCGCGGGCTCGACT CCCGCACCGGCCACCA
tRNA-Val	chrX	-	18602950	18603022	GGTTCCATAGTGTAGTGGTTATCACGTCTGC TTTACACGCAGAAGGTCCTGGGTTTCGAGCCC CAGTGGAACCACCA
tRNA-Leu	chrX	-	55224480	55224554	GTTAAGATGGCAGAGCCCGGCAATTGCATA AGACTTAAAACCTTTATAATCAGAGGTTCAAC TCCTCTCATTAAACACCA
tRNA-Ile	chrX_ra ndom	-	86423	86496	GGCCGGTTAGCTCAGTTGGTAAGAGCGTGG TGCTGATAACACCAAGGTCGCGGGCTCGACT CCCGCACCGGCCACCA
tRNA-Ile	chrX_ra ndom	+	118398	118471	GGCCGGTTAGCTCAGTTGGTAAGAGCGTGG TGCTGATAACACCAAGGTCGCGGGCTCGACT CCCGCACCGGCCACCA
tRNA-Ile	chrX_ra ndom	-	398948	399021	GGCCGGTTAGCTCAGTTGGTAAGAGCGTGG TGCTGATAACACCAAGGTCGCGGGCTCGACT CCCGCACCGGCCACCA
tRNA-Ile	chrX_ra ndom	+	406943	407016	GGCCGGTTAGCTCAGTTGGTAAGAGCGTGG TGCTGATAACACCAAGGTCGCGGGCTCGACT CCCGCACCGGCCACCA
tRNA-Ile	chrX_ra ndom	+	465544	465617	GGCCGGTTAGCTCAGTTGGTAAGAGCGTGG TGCTGATAACACCAAGGTCGCGGGCTCGACT CCCGCACCGGCCACCA
tRNA-Phe	chrM	+	579	649	GTTTATGTAGCTTACCTCCTCAAAGCAATACA CTGAAAATGTTTAGACGGGCTCACATCACCC CATAAACACCA
tRNA-Val	chrM	+	1604	1672	CAGAGTGTAGCTTAACACAAAGCACCCAACT TACACTTAGGAGATTTCAACTTAAGTTGACC GCTCTGACCA

tRNA-Leu	chrM	+	3231	3305	GTTAAGATGGCAGAGCCCCGTAATCGCATA AAACTTAAAACTTTACAGTCAGAGGTTCAAT TCCTCTTCTTAACACCA
tRNA-Ile	chrM	+	4264	4332	AGAAATATGTCTGATAAAAAGAGTTACTTTGA TAGAGTAAATAATAGGAGCTTAAACCCCCTT ATTTCTACCA
tRNA-Gln	chrM	-	4330	4401	TAGGATGGGGTGTGATAGGTGGCACGGAGA ATTTTGGATTCTCAGGGATGGGTTCGATTCT CATAGTCCTAGCCA
tRNA-Met	chrM	+	4403	4470	AGTAAGGTCAGCTAAATAAGCTATCGGGCCC ATACCCCGAAAAATGTTGTTATACCCTTCCCG TACTACCA
tRNA-Trp	chrM	+	5513	5580	AGAAATTTAGGTTAAATACAGACCAAGAGCC TTCAAAGCCCTCAGTAAGTTGCAATACTTAAT TTCTGCCA
tRNA-Ala	chrM	-	5588	5656	AAGGGCTTAGCTTAATTAAAGTGGCTGATTT GCGTTCAGTTGATGCAGAGTGGGGTTTTGCA GTCCTTACCA
tRNA-Asn	chrM	-	5658	5730	TAGATTGAAGCCAGTTGATTAGGGTGCTTAG CTGTTAACTAAGTGTGTTGGGTTTAAGTCC CATTGGTCTAGCCA
tRNA-Cys	chrM	-	5762	5827	AGCTCCGAGGTGATTTTCATATTGAATTGCA AATTCGAAGAAGCAGCTTCAAACCTGCCGG GGCTTCCA
tRNA-Tyr	chrM	-	5827	5892	GGTAAAATGGCTGAGTGAAGCATTGGACTG TAAATCTAAAGACAGGGGTTAGGCCTCTTTT TACCACCA
tRNA-Ser	chrM	-	7446	7517	TTGAAAAAGTCATGGAGGCCATGGGGTTGG CTTGAAACCAGCTTTGGGGGGTTTCGATTCTT TCCTTTTTTGCCA
tRNA-Asp	chrM	+	7519	7586	AAGGTATTAGAAAAACCATTTTCATAACTTTG TCAAAGTTAAATTATAGGCTAAATCCTATATA TCTTACCA
tRNA-Lys	chrM	+	8296	8365	CACTGTAAAGCTAACTTAGCATTAACTTTTA AGTTAAAGATTAAGAGAACCAACACCTCTTT ACAGTGACCA
tRNA-Gly	chrM	+	9992	10059	ACTCTTTTAGTATAAATAGTACCGTTAACTTC CAATTAAGTATTTTGACAACATTCAAAAAA GAGTACCA
tRNA-Arg	chrM	+	10406	10470	TGGTATATAGTTTAAACAAAACGAATGATTT CGACTCATTAAATTATGATAATCATATTTACC AACCA
tRNA-His	chrM	+	12139	12207	GTAAATATAGTTTAAACAAAACATCAGATTG TGAATCTGACAACAGAGGCTTACGACCCCTT ATTTACCCCA
tRNA-Ser	chrM	+	12208	12266	GAGAAAGCTCACAAGAACTGCTAACTCATGC CCCCATGTCTAACAACATGGCTTTCTCACCA

tRNA-Leu	chrM	+	12267	12337	ACTTTTAAAGGATAACAGCTATCCATTGGTCT TAGGCCCCAAAAATTTTGGTGCAACTCCAAA TAAAAGTACCA
tRNA-Glu	chrM	-	14675	14743	GTTCTTGTAGTTGAAATACAACGATGGTTTTT CATATCATTGGTCGTGGTTGTAGTCCGTGCG AGAATACCA
tRNA-Thr	chrM	+	15889	15954	GTCCTTGTAGTATAAACTAATACACCAGTCTT GTAAACCGGAGACGAAAACCTTTTTCCAAGG ACACCA
tRNA-Pro	chrM	-	15956	16024	CAGAGAATAGTTTAAATTAGAATCTTAGCTT TGGGTGCTAATGGTGGAGTTAAAGACTTTTT CTCTGATCCA