

TABLE 1: The human MRP pseudogenes

Name	GenBank accession No.	Cytogenic band	Chromosomal location ^a	Sequence divergence ^b	Deduced polypeptide ^c			Class ^d
					Interval	Fraction	ID	
<i>MRPS5</i>	NM_031902	2p11.2-q11.2	117.57M (-)					
<i>MRPS5P1</i>	AY135346	2q14.3	117.75M (-)	0.021 ± 0.012	311-356	11%	100%	F
<i>MRPS5P2</i>	AY135347	5P14.1	32.82M (+)	0.20 ± 0.028	316-430	27%	68%	F
<i>MRPS5P3</i>	AY135348	5q23.2	127.55M (-)	0.096 ± 0.009	1-430	100%	83%	P
<i>MRPS5P4</i>	AY135349	18q21.33	61.77M (+)	0.20 ± 0.028	316-430	27%	68%	F
<i>MRPS6</i>	NM_032476	21q21.3-q22.1	32.07M (+)					
<i>MRPS6P1</i>	AY135350	1p35.2	31.36M (-)	0.18 ± 0.026	1-125	100%	70%	P
<i>MRPS6P2</i>	AY135351	1P34.1	45.50M (-)	0.11 ± 0.018	1-125	100%	80%	P
<i>MRPS6P3</i>	AY135352	3q13.33	122.17M (+)	0.18 ± 0.026	1-125	100%	70%	P
<i>MRPS6P4</i>	AY135353	12q21.33	93.37M (-)	0.30 ± 0.039	1-108	86%	61%	P
<i>MRPS7</i>	NM_015971	17q23-q25	77.21M (+)					
<i>MRPS7P1</i>	AY135354	8p11.22	38.32M (-)	0.36 ± 0.03	67-242	73%	51%	P
<i>MRPS7P2</i>	AY135355	12p13.1	16.52M (+)	0.20 ± 0.019	20-242	92%	70%	P
<i>MRPS10</i>	NM_018141	6p21.1-p12.1	28.88M (-)					
<i>MRPS10P1</i>	AY135284	1q23.2	172.50M (+)	0.11 ± 0.03	109-145	18%	97%	F
<i>MRPS10P2</i>	AY135285	3p26.3	0.50M (+)	0.31 ± 0.034	61-201	70%	60%	P
<i>MRPS10P3</i>	AY135286	3p26.3	0.72M (+)	0.31 ± 0.034	61-201	70%	60%	P
<i>MRPS10P4</i>	AY135287	3p26.1	6.70M (-)	0.31 ± 0.034	61-201	70%	60%	P
<i>MRPS10P5</i>	AY135288	9p12	39.95M (-)	0.037 ± 0.01	1-201	100%	96%	P
<i>MRPS11</i>	NM_022839	15q25	85.05M (-)					
<i>MRPS11P1</i>	AY135289	20p11.23	20.79M (-)	0.17 ± 0.021	41-194	79%	73%	P
<i>MRPS15</i>	NM_031280	1p35-p34.1	32.42M (-)					
<i>MRPS15P1</i>	AY135290	15q33.33	69.91M (-)	0.23 ± 0.024	1-257	100%	57%	P
<i>MRPS15P2</i>	AY135291	19q13.32	60.97M (+)	0.33 ± 0.026	1-257	100%	60%	P
<i>MRPS16</i>	NM_016065	10q22.1	76.03M (-)					
<i>MRPS16P1</i>	AY135292	8q21.3	91.39M (+)	0.15 ± 0.021	1-137	100%	80%	P
<i>MRPS16P2</i>	AY135293	20q13.32	57.49M (+)	0.1 ± 0.017	1-137	100%	84%	P
<i>MRPS16P3</i>	AY135294	22q13.1	32.84M (+)	0.22 ± 0.027	1-137	100%	67%	P
<i>MRPS17</i>	NM_015969	7p11-q11.21	58.96M (-)					
<i>MRPS17P1</i>	AY135295	1p34.3	40.47M (-)	0.062 ± 0.013	1-130	100%	92%	P
<i>MRPS17P2</i>	AY135296	1p34.2	42.81M (-)	0.059 ± 0.013	1-130	100%	92%	P
<i>MRPS17P3</i>	AY135297	3p12.1	87.93M (-)	0.26 ± 0.032	1-130	100%	63%	P
<i>MRPS17P4</i>	AY135298	4p16.3	2.77M (-)	0.087 ± 0.016	1-130	100%	85%	P
<i>MRPS17P5</i>	AY135299	6q22.33	134.39M (+)	0.42 ± 0.063	48-130	64%	56%	F
<i>MRPS17P6</i>	AY135300	14q11.2	18.45M (+)	0.25 ± 0.041	62-130	53%	60%	F
<i>MRPS17P7</i>	AY135301	18q21.31	57.91M (-)	0.087 ± 0.016	1-130	100%	85%	P
<i>MRPS17P8</i>	AY135302	18q21.31	58.01M (-)	0.087 ± 0.016	1-130	100%	85%	P
<i>MRPS17P9</i>	AY135303	Xq24	111.64M (+)	0.076 ± 0.015	1-130	100%	87%	P
<i>MRPS18A</i>	NM_018135	6p21.3	30.34M (-)					
<i>MRPS18AP1</i>	AY135304	3p21.31	49.80M (+)	0.11 ± 0.015	1-196	100%	82%	P
<i>MRPS18B</i>	NM_014046	6p21.3	36.04M (+)					
<i>MRPS18BP1</i>	AY135305	1q41	224.06M (-)	0.14 ± 0.03	197-258	24%	81%	F
<i>MRPS18BP2</i>	AY135306	2q22.1	132.86M (+)	0.16 ± 0.016	1-258	100%	74%	P
<i>MRPS18C</i>	NM_016067	4q21.23	83.51M (+)					

<i>MRPS18CP1</i>	AY135307	3q26.1	170.51M (+)	0.067 ± 0.026	1-33	23%	100%	F
<i>MRPS18CP2</i>	AY135308	8p23.1	6.84M (-)	0.029 ± 0.01	1-142	100%	63%	P
<i>MRPS18CP3</i>	AY135309	8p21.3	18.74M (+)	1.5 ± 0.36	95-142	34%	82%	D
<i>MRPS18CP4</i>	AY135310	12p13.31	8.49M (-)	N/A	123-142	14%	85%	F
<i>MRPS18CP5</i>	AY135311	15q11.2	22.14M (-)	0.08 ± 0.014	1-142	100%	83%	P
<i>MRPS18CP6</i>	AY135312	22q13.31	41.61M (-)	1.36 ± 0.25	62-139	57%	87%	F
<i>MRPS21</i>	NM_018997	1q21.2	151.90M (+)					
<i>MRPS21P1</i>	AY135313	1p34.3	36.59M (+)	0.095 ± 0.02	1-87	100%	80%	P
<i>MRPS21P2</i>	AY135314	1q22	159.92M (+)	0.11 ± 0.022	1-87	100%	80%	P
<i>MRPS21P3</i>	AY135315	1q31.2	203.45M (+)	0.06 ± 0.016	1-87	100%	85%	P
<i>MRPS21P4</i>	AY135316	9p13.1	38.53M (+)	0.20 ± 0.042	44-87	51%	68%	F
<i>MRPS21P5</i>	AY135317	10p12.1	30.34M (+)	0.17 ± 0.029	1-87	100%	66%	P
<i>MRPS21P6</i>	AY135318	10q23.1	88.05M (+)	0.098 ± 0.021	1-87	100%	82%	P
<i>MRPS21P7</i>	AY135319	16q12.1	48.60M (+)	0.25 ± 0.037	1-87	100%	62%	P
<i>MRPS21P8</i>	AY135320	16q12.1	48.66M (+)	0.25 ± 0.038	1-87	100%	59%	P
<i>MRPS21P9</i>	AY135321	17q22	50.82M (-)	0.37 ± 0.048	1-87	100%	63%	P
<i>MRPS22</i>	NM_020191	3q23						
<i>MRPS22P1</i>	AY135322	Xq21.31	80.43M (-)	0.42 ± 0.040	75-246	48%	39%	F
<i>MRPS23</i>	NM_016070	17q22-q23	58.33M (-)					
<i>MRPS23P1</i>	AY135323	7p13	45.90M (+)	0.22 ± 0.024	1-190	100%	69%	P
<i>MRPS24</i>	NM_032014	7p14	44.89M (-)					
<i>MRPS24P1</i>	AY135324	11p15.4	7.63M (-)	0.15 ± 0.019	1-167	100%	70%	P
<i>MRPS25</i>	NM_022497	3p25						
<i>MRPS25P1</i>	AY135325	4q21.23	80.52M (+)	0.16 ± 0.02	1-173	100%	71%	P
<i>MRPS29</i>	NM_004632	1q21.3	157.65(+)					
<i>MRPS29P1</i>	AY135326	1q21.3	157.83(+)	1.032 ± 0.150	124-199	19%	88%	D
<i>MRPS29P2</i>	AY135327	2q31.2	172.44M (+)	0.059 ± 0.011	227-398	43%	88%	F
<i>MRPS31</i>	NM_005830	13q13.3	39.91M (-)					
<i>MRPS31P1</i>	AY135328	3p21.33	42.48M (-)	1.10 ± 0.15	330-395	17%	79%	D
<i>MRPS31P2</i>	AY135329	13q12.11	17.31M (-)	0.075 ± 0.015	200-320	31%	85%	D
<i>MRPS31P3</i>	AY135330	13q12.11	19.12M (+)	0.13 ± 0.031	272-320	12%	94%	D
<i>MRPS31P4</i>	AY135331	13q14.11	44.96M (+)	0.13 ± 0.013	1-320	81%	74%	D
<i>MRPS31P5</i>	AY135332	13q14.2	52.97M (+)	0.12 ± 0.012	1-320	80%	79%	D
<i>MRPS33</i>	NM_016071, NM_053035	7q32-q34	144.27M (-)					
<i>MRPS33P1</i>	AY135333	1q21.3	156.34M (+)	0.25 ± 0.045	32-81	47%	76%	F
<i>MRPS33P2</i>	AY135334	4p14	40.68M (-)	0.13 ± 0.022	1-106	100%	78%	P
<i>MRPS33P3</i>	AY135335	4q26	117.37M (+)	0.12 ± 0.021	1-106	100%	79%	P
<i>MRPS33P4</i>	AY135336	20q13.13	50.93M (+)	0.28 ± 0.0038	19-106	83%	64%	P
<i>MRPS35</i>	NM_014018	12q21.1-q21.2	29.07M (+)					
<i>MRPS35P1</i>	AY135337	3p25.3	7.74M (+)	0.25 ± 0.053	145-180	16%	61%	F
<i>MRPS35P2</i>	AY135338	5q21.3	111.09M (-)	1.4 ± 0.32	171-227	25%	74%	F
<i>MRPS35P3</i>	AY135339	10q23.1	87.00M (+)	2.2 ± 0.52	30-227	87%	53%	P
<i>MRPS36</i>	NM_033281	5q12.1	103.32M (+)					
<i>MRPS36P1</i>	AY135340	3p25.3	9.06M (-)	0.03 ± 0.01	1-103	100%	95%	P
<i>MRPS36P2</i>	AY135341	4q35.1	186.51M (+)	0.23 ± 0.052	72-103	31%	78%	F
<i>MRPS36P3</i>	AY135342	8q24.13	121.05M (+)	0.13 ± 0.034	59-97	38%	85%	F
<i>MRPS36P4</i>	AY135343	11q23.2	116.62M (+)	0.13 ± 0.022	1-103	100%	79%	P
<i>MRPS36P5</i>	AY135344	12q12	44.25M (-)	0.20 ± 0.03	1-103	100%	77%	P
<i>MRPS36P6</i>	AY135345	20p12.1	13.34M (-)	0.31 ± 0.045	25-93	67%	70%	F
<i>MRPL2</i>	NM_015950	6p21.3	29.72 (-)					
<i>MRPL2P1</i>	AY135252	12q21.33	93.67M (+)	0.11 ± 0.012	1-305	100%	79%	P

<i>MRPL3</i>	NM_007208	3q21-23	135.77M (+)						
<i>MRPL3P1</i>	AY135256	13q12.11	17.06M (-)	0.045 ± 0.007	1-348	100%	91%	P	
<i>MRPL9</i>	NM_031420	1q21	153.41M (-)						
<i>MRPL9P1</i>	AY135283	8q21.11	76.16M (-)	0.14 ± 0.016	60-267	78%	79%	P	
<i>MRPL11</i>	NM_016050	11q13.3	71.61M (-)						
<i>MRPL11P1</i>	AY135246	2p16.3	50.04M (+)	0 ± 0	159-192	18%	100%	F	
<i>MRPL11P2</i>	AY135247	5q31.3	145.64M (-)	0.063 ± 0.012	1-192	100%	64%	P	
<i>MRPL11P3</i>	AY135248	12q21.2	82.54M (-)	0.20 ± 0.048	161-192	17%	84%	F	
<i>MRPL14</i>	NM_032111	6p21.1	47.58M (+)						
<i>MRPL14P1</i>	AY135249	17p13.3	1.11M (+)	0.27 ± 0.046	68-130	43%	56%	F	
<i>MRPL15</i>	NM_014175	8q11.2-q13	54.48M (+)						
<i>MRPL15P1</i>	AY135250	15q26.1	87.58M (-)	0.14 ± 0.014	19-296	94%	79%	P	
<i>MRPL15P2</i>	AY135251	15q26.1	87.76M (-)	0.14 ± 0.014	19-296	94%	79%	P	
<i>MRPL20</i>	NM_017971	1p36.3-36.2	8.36M (-)						
<i>MRPL20P1</i>	AY135253	21q22.2	34.94M (+)	0.16 ± 0.021	1-149	100%	72%	P	
<i>MRPL22</i>	NM_014180	5q33.1-33.3	155.76M (-)						
<i>MRPL22P1</i>	AY135254	4q12	57.53M (-)	0.25 ± 0.023	1-228	100%	70%	P	
<i>MRPL22P2</i>	AY135255	5q33.1	155.88M (-)	0.029 ± 0.02	66-88	10%	96%	F	
<i>MRPL30</i>	NM_016503	2q11.2	93.34M (+)						
<i>MRPL30P1</i>	AY135257	6p12.1	60.82M (+)	0.048 ± 0.012	12-141	86%	89%	P	
<i>MRPL30P2</i>	AY135258	12p11.22	33.23M (+)	0.19 ± 0.026	13-135	81%	76%	P	
<i>MRPL30P3</i>	AY135259	12p11.22	33.44M (-)	0.20 ± 0.026	13-135	81%	76%	P	
<i>MRPL32</i>	NM_031903	7p14	43.87M (+)						
<i>MRPL32P1</i>	AY135260	Xp11.23	43.67M (-)	0.16 ± 0.027	104-188	45%	74%	F	
<i>MRPL35</i>	NM_016622	2p11.2	85.25M (+)						
<i>MRPL35P1</i>	AY135261	6p23	14.55M (+)	0.096 ± 0.017	1-122	100%	83%	P	
<i>MRPL35P2</i>	AY135262	10q21.3	64.69M (-)	0.072 ± 0.015	1-122	100%	88%	P	
<i>MRPL35P3</i>	AY135263	10q22.2	77.61M (+)	0.069 ± 0.014	1-122	100%	88%	P	
<i>MRPL35P4</i>	AY135264	Xp22.31	10.25M (-)	0.12 ± 0.019	1-122	100%	79%	P	
<i>MRPL36</i>	NM_032479	5p15.3	25.10M (+)						
<i>MRPL36P1</i>	AY135265	2p13.2	68.66M (-)	0.029 ± 0.01	1-103	100%	95%	P	
<i>MRPL42</i>	NM_014050	12q22	104.81M (+)						
<i>MRPL42P1</i>	AY135266	4q27	119.61M (-)	0.16 ± 0.022	1-142	100%	73%	P	
<i>MRPL42P2</i>	AY135267	6p22.3	16.83M (+)	0.18 ± 0.023	1-142	100%	71%	P	
<i>MRPL42P3</i>	AY135268	6q24.2	151.16M (+)	0.17 ± 0.025	33-142	77%	75%	P	
<i>MRPL42P4</i>	AY135269	7p12.1	52.97M (-)	0.28 ± 0.034	24-142	84%	64%	P	
<i>MRPL42P5</i>	AY135270	15q13.3	35.66M (-)	0.15 ± 0.021	1-142	100%	78%	P	
<i>MRPL45</i>	NM_032351	17q21.31	39.99M (+)						
<i>MRPL45P1</i>	AY135271	2p11.2	86.39M (-)	0.10 ± 0.013	1-306	100%	82%	P	
<i>MRPL45P2</i>	AY135272	17q21.33	46.50M (-)	0.002 ± 0.002	1-153	50%	95%	D.	
<i>MRPL48</i>	NM_016055	11q13.2	74.70M (+)						
<i>MRPL48P1</i>	AY135273	6p24.1	10.94M (-)	0.066 ± 0.011	1-212	100%	89%	P	
<i>MRPL49</i>	NM_004927	11q13	65.64M (-)						
<i>MRPL49P1</i>	AY135274	5q12.1	64.51M (+)	0.27 ± 0.028	1-166	100%	69%	P	
<i>MRPL49P2</i>	AY135275	8p22	16.77M (+)	0.30 ± 0.032	1-166	100%	61%	P	
<i>MRPL50</i>	NM_019051	9q31.1	93.10M (-)						
<i>MRPL50P1</i>	AY135276	2p22.3	33.92M (-)	0.25 ± 0.03	25-158	85%	60%	P	
<i>MRPL50P2</i>	AY135277	2q34	205.04M (-)	0.069 ± 0.013	1-158	100%	86%	P	
<i>MRPL50P3</i>	AY135278	5p12	52.43M (+)	0.10 ± 0.016	1-158	100%	82%	P	
<i>MRPL50P4</i>	AY135279	10q23.1	86.05M (-)	0.088 ± 0.015	1-158	100%	82%	P	
<i>MRPL51</i>	NM_016497	12p13.3-p13.1	6.55M (-)						

<i>MRPL51P1</i>	AY135280	4p15.2	30.59M (+)	0.38 ± 0.05	42-128	68%	54%	F
<i>MRPL51P2</i>	AY135281	21q22.3	41.08M (-)	0.11 ± 0.019	1-128	100%	79%	P
<i>MRPL53</i>	NM_053050	2p12	73.30M (-)					
<i>MRPL53P1</i>	AY135282	1p13.2	119.64M (-)	0.26 ± 0.035	1-112	100%	67%	P
<i>MRP63</i>	NM_024026	13q12.11	19.03M (+)					
<i>MRP63P1</i>	AY135236	1p13.1	122.10M (-)	0.40 ± 0.053	1-102	100%	46%	P
<i>MRP63P2</i>	AY135237	1q42.13	235.10M (-)	0.37 ± 0.055	43-102	59%	55%	F
<i>MRP63P3</i>	AY135238	3p21.31	48.56M (-)	0.23 ± 0.041	44-102	58%	71%	F
<i>MRP63P4</i>	AY135239	3p21.31	50.32M (+)	0.36 ± 0.049	11-102	90%	46%	P
<i>MRP63P5</i>	AY135240	4p16.3	2.37M (-)	0.36 ± 0.049	11-102	90%	41%	P
<i>MRP63P6</i>	AY135241	5q34	168.31M (+)	0.33 ± 0.041	1-102	100%	61%	P
<i>MRP63P7</i>	AY135242	8q22.2	97.82M (-)	0.30 ± 0.042	1-102	100%	55%	P
<i>MRP63P8</i>	AY135243	14q13.2	32.63M (-)	0.34 ± 0.048	1-102	100%	50%	P
<i>MRP63P9</i>	AY135244	14q22.1	49.16M (+)	0.28 ± 0.047	44-102	58%	58%	F
<i>MRP63P10</i>	AY135245	Yp11.2	9.91M (+)	0.40 ± 0.055	11-102	90%	41%	P

^a Chromosomal coordinate of the gene/pseudogene and chromosomal strand.

^b Nucleotide sequence divergence from the functional MRP gene.

^c Interval: the residue range in the MRP protein sequence that the pseudogene matches to.

Fraction: percentage of the MRP protein sequence that the pseudogene matches to.

ID: amino acid sequence identity between the functional MRP protein and the predicted pseudogene sequence.

^d Pseudogene class. P: processed; F: fragment; D: duplicated.