

Table SI. Hardy-Weinberg equilibrium of eight SNPs in the control and URSA groups.

SNP	Control		URSA	
	$\chi^2$	P-value	$\chi^2$	P-value
14-bp Ins /Del	0.569	0.451	0.153	0.696
3003 C/T	0.018	0.893	0.017	0.895
3010 G/C	2.514	0.113	2.164	0.141
3027 C/A	1.088	0.297	0.158	0.691
3035 C/T	0.329	0.566	0.158	0.691
3142 C/G	1.529	0.216	3.905	0.048 <sup>a</sup>
3187 A/G	1.493	0.222	0.879	0.348
3196 C/T	0.000	1.000	132.999	<0.001 <sup>a</sup>

<sup>a</sup>Statistically significant. SNP, single nucleotide polymorphism; URSA, unexplained recurrent spontaneous abortion; Ins, insertion; Del, deletion.

Table SII. Alleles and genotypes frequencies of the human leukocyte antigen-G 3'-untranslated region polymorphic sites in the URSA and control groups.

Polymorphisms	Control		URSA		OR	95% CI	$\chi^2$	P-value <sup>a</sup>	P <sub>Bonf</sub> <sup>a</sup>
	Cases (n=128)	Freq, %	Cases (n=133)	Freq, %					
14-bp Ins/Del									
Del	216	84.4	213	80.1	1.000				
Ins	40	15.6	53	19.9	1.344	0.855-2.112	1.647	0.199	
Del/Del	90	70.3	86	64.7	1.000				
Ins/Del	36	28.1	41	30.8	1.192	0.697-2.038	0.412	0.521	
Ins/Ins	2	1.6	6	4.5	3.140	0.617-15.982	1.176	0.278	

+3003C/T									
C	3	1.2	3	1.1	1.000				
T	253	98.8	263	98.9	1.040	0.208-5.198	0.002	0.962	
CC	0	0.0	0	0.0	-	-	-	-	
CT	3	2.3	3	2.3	1.000				
TT	125	97.7	130	97.7	1.040	0.206-5.250	0.002	0.962	
+3010G/C									
G	131	51.2	98	36.8	1.000				
C	125	48.8	168	63.2	1.797	1.267-2.548	10.878	0.001 <sup>b</sup>	0.008 <sup>b</sup>
GG	38	29.7	22	16.5	1.000				

GC	55	43.0	54	40.6	1.696	0.889-3.234	2.592	0.107	
CC	35	27.3	57	42.9	2.813	1.435-5.513	9.305	0.002 <sup>b</sup>	0.016 <sup>b</sup>
+3027C/A									
C	221	86.3	216	81.2	1.000				
A	35	13.7	50	18.8	1.462	0.913-2.341	2.514	0.113	
CC	94	73.4	87	65.4	1.000				
CA	33	25.8	42	31.6	1.375	0.800-2.363	1.335	0.248	
AA	1	0.8	4	3.0	4.322	0.474-39.421	1.986	0.159	
+3035C/T									
C	218	85.2	216	81.2	1.000				

T	38	14.8	50	18.8	1.328	0.837-2.108	1.455	0.228	
CC	92	71.9	87	65.4	1.000				
CT	34	26.6	42	31.6	1.306	0.762-2.239	0.947	0.331	
TT	2	1.6	4	3.0	2.115	0.378-11.841	0.207	0.649	
+3142C/G									
C	127	49.6	107	40.2	1.000				
G	129	50.4	159	59.8	1.463	1.034-2.069	4.645	0.031 <sup>b</sup>	0.248
CC	35	27.3	27	20.3	1.000				
CG	57	44.5	53	39.8	1.205	0.645-2.254	0.342	0.559	
GG	36	28.1	53	39.8	1.908	0.990-3.680	3.756	0.053	

+3187A/G									
A	133	52.0	175	65.8	1.000				
G	123	48.0	91	34.2	0.562	0.395-0.800	10.325	0.001 <sup>b</sup>	0.008 <sup>b</sup>
AA	38	29.7	60	45.1	1.000				
AG	57	44.5	55	41.4	0.611	0.353-1.059	3.098	0.078	
GG	33	25.8	18	13.5	0.345	0.171-0.698	9.042	0.003 <sup>b</sup>	0.024 <sup>b</sup>
+3196C/G									
C	256	1.0	262	98.5					
G	0	0.0	4	1.5	-	-	3.879	0.048 <sup>b</sup>	0.384
CC	128	1.0	131	98.5					

CG	0	0.0	0	0.0					
GG	0	0.0	2	1.5	-	-	1.939	0.164	

<sup>a</sup>URSA vs. control group using the  $\chi^2$  test; <sup>b</sup>statistically significant.P<sub>Bonf</sub>,statistical significance calculated with Bonferroni correction for multiple comparisons;URSA, unexplained recurrent spontaneous abortion; Ins, insertion; Del, deletion; OR, odds ratio; CI, confidence interval.

Table SIII. Alleles and genotypes frequencies of the human leukocyte antigen-G 3'-untranslated regionpolymorphic sites in the primary URSA and control groups.

Polymorphi	Control		Primary URSA		OR	95% CI	$\chi^2$	P-value <sup>a</sup>	P <sub>Bonf</sub> <sup>a</sup>
	Cases (n=128)	Freq, %	Cases (n=83)	Freq, %					
14-bp									
Ins/Del									
Del	216	84.4	138	83.1	1.000				
Ins	40	15.6	28	16.9	1.096	0.646-1.858	0.115	0.734	
Del/Del	90	70.3	57	68.7	1.000				
Ins/Del	36	28.1	24	28.9	1.053	0.570-1.945	0.027	0.870	
Ins/Ins	2	1.6	2	2.4	1.579	0.216-11.52	0.206	0.650	
					6				
+3003C/T									
C	3	1.2	3	1.8	1.000				
T	253	98.8	163	98.2	0.644	0.128-3.231	0.014	0.906	
CC	0	0.0	0	0.0	-	-	-	-	
CT	3	2.3	3	3.6	1.000				
TT	125	97.7	80	96.4	0.640	0.126-3.249	0.014	0.906	

+3010G/C									
G	131	51.2	65	39.2	1.000				
C	125	48.8	101	60.8	1.628	1.095-2.421	5.845	0.016 <sup>b</sup>	0.128
GG	38	29.7	13	15.7	1.000				
GC	55	43.0	39	47.0	2.073	0.978-4.395	3.679	0.055	
CC	35	27.3	31	37.3	2.589	1.170-5.727	5.657	0.017 <sup>b</sup>	0.136
+3027C/A									
C	221	86.3	142	85.5	1.000				
A	35	13.7	24	14.5	1.067	0.609-1.869	0.052	0.820	
CC	94	73.4	59	71.1	1.000				
CA	33	25.8	24	28.9	1.159	0.624-2.151	0.218	0.640	
AA	1	0.8	0	0.0	-	-	0.000	1.000	
+3035C/T									
C	218	85.2	142	85.5	1.000				
T	38	14.8	24	14.5	1.031	0.593-1.793	0.012	0.913	
CC	92	71.9	59	71.1	1.000				
CT	34	26.6	24	28.9	1.101	0.594-2.039	0.093	0.760	
TT	2	1.6	0	0.0	-	-	0.157	0.692	

+3142C/G									
C	127	49.6	69	41.6	1.000				
G	129	50.4	97	58.4	1.384	0.933-2.053	2.619	0.106	
CC	35	27.3	13	15.7	1.000				
CG	57	44.5	43	51.8	2.031	0.960-4.298	3.493	0.062	
GG	36	28.1	27	32.5	2.019	0.899-4.534	2.941	0.086	
+3187A/G									
A	133	52.0	104	62.7	1.000				
G	123	48.0	62	37.3	1.551	1.041-2.311	4.681	0.031 <sup>b</sup>	0.248
AA	38	29.7	33	39.8	1.000				
AG	57	44.5	38	45.8	0.768	0.412-1.429	0.697	0.404	
GG	33	25.8	12	14.5	0.419	0.187-0.940	4.553	0.033 <sup>b</sup>	0.264
+3196C/G									
C	256	1.0	162	97.6					

G	0	0.0	4	2.4	-	-	6.228	0.013 <sup>b</sup>	0.104
CC	128	1.0	81	97.6					
CG	0	0.0	0	0.0					
GG	0	0.0	2	2.4	-	-	3.114		

<sup>a</sup>URSA vs. control group using the  $\chi^2$  test; <sup>b</sup>statistically significant. P<sub>Bonf</sub>, P-value calculated with Bonferroni correction for multiple comparisons; URSA, unexplained recurrent spontaneous abortion; Ins, insertion; Del, deletion; OR, odds ratio; CI, confidence interval.

Table SIV. Alleles and genotypes frequencies of the human leukocyte antigen-G 3'-untranslated regionpolymorphic sites in the secondary URSA and control groups.

Polymorphisms	Control		Secondary URSA		OR	95% CI	$\chi^2$	P-value <sup>a</sup>	P <sub>Bonf</sub> <sup>a</sup>
	Cases (n=128)	Freq, %	Cases(n=50)	Freq, %					
14-bp Ins/Del									
Del	216	84.4	75	75.0	1.000				
Ins	40	15.6	25	25.0	1.800	1.024-3.166	4.235	0.040 <sup>b</sup>	0.320
Del/Del	90	70.3	29	58.0	1.000				
Ins/Del	36	28.1	17	34.0	1.466	0.719-2.989	1.111	0.292	

Ins/Ins	2	1.6	4	0.8	6.207	1.081-35.654	4.499	0.034 <sup>b</sup>	0.272
+3003C/T									
C	3	1.2	0	0.0					
T	253	98.8	100	1.0	-	-	1.182	0.277	
CC	0	0.0	0	0.0					
CT	3	2.3	0	0.0					
TT	125	97.7	50	1.0	-	-	1.192	0.275	
+3010G/C									
G	131	51.2	33	33.0	1.000				
C	125	48.8	67	67.0	2.128	1.312-3.451	9.558	0.002 <sup>b</sup>	0.016 <sup>b</sup>
GG	38	29.7	9	18.0	1.000				
GC	55	43.0	15	30.0	1.152	0.457-2.901	0.090	0.765	
CC	35	27.3	26	52.0	3.137	1.293-7.609	6.678	0.010 <sup>b</sup>	0.080
+3027C/A									
C	221	86.3	74	74.0	1.000				
A	35	13.7	26	26.0	2.219	1.253-3.930	7.697	0.006 <sup>b</sup>	0.048 <sup>b</sup>
CC	94	73.4	28	56.0	1.000				
CA	33	25.8	18	36.0	1.831	0.898-3.735	2.807	0.094	

AA	1	0.8	4	8.0	13.429	1.442-125.080	5.543	0.019 <sup>b</sup>	0.152
+3035C/T									
C	218	85.2	74	74.0	1.000				
T	38	14.8	26	26.0	2.016	1.146-3.544	6.070	0.014 <sup>b</sup>	0.112
CC	92	71.9	28	56.0	1.000				
CT	34	26.6	18	36.0	1.739	0.854-3.541	2.357	0.125	
TT	2	1.6	4	8.0	6.571	1.143-37.789	3.607	0.058	
+3142C/G									
C	127	49.6	38	38.0	1.000				
G	129	50.4	62	62.0	1.606	1.002-2.576	3.898	0.048 <sup>b</sup>	0.384
CC	35	27.3	14	28.0	1.000				
CG	57	44.5	10	20.0	0.439	0.176-1.094	3.212	0.073	
GG	36	28.1	26	52.0	1.806	0.812-4.015	2.121	0.145	
+3187A/G									
A	133	52.0	71	71.0	1.000				
G	123	48.0	29	29.0	0.442	0.269-0.726	10.663	0.001 <sup>b</sup>	0.008 <sup>b</sup>
AA	38	29.7	27	54.0	1.000				
AG	57	44.5	17	34.0	0.420	0.202-0.873	5.513	0.019 <sup>b</sup>	0.152

GG	33	25.8	6	12.0	0.256	0.094-0.696	7.697	0.006 <sup>b</sup>	0.048 <sup>b</sup>
+3196C/G									
C	256	1.0	100	1.0					
G	0	0.00	0	0.0	-	-	-	-	
CC	128	1.0	50	1.0					
CG	0	0.0	0	0.0					
GG	0	0.0	0	0.0	-	-	-	-	

<sup>a</sup>URSA vs. control group using the  $\chi^2$  test; ; <sup>b</sup>statistically significant.P<sub>Bonf</sub>, P-value calculated with Bonferroni correction for multiple comparisons; URSA, unexplained recurrent spontaneous abortion; Ins, insertion; Del, deletion; OR, odds ratio; CI, confidence interval.

Table SV. Analyzed haplotype frequencies of the human leukocyte antigen-G 3'UTR in the URSA and control groups.

Haplotypes	Control, %	URSA, %	OR	95% CI	$\chi^2$	P-value <sup>a</sup>
UTR-1 (DelTGCCCGC)	46.8	31.5	0.501	0.347-0.722	13.826	<0.001 <sup>b</sup>
UTR-2(InsTCCCGAG)	0.0	1.5				
UTR-3(DelTCCCGAC)	33.8	36.4	1.124	0.778-1.623	0.386	0.534
UTR-4(DelCGCCCAC)	1.2	1.1				
UTR-5(InsTCCTGAC)	0.8	0.0				
UTR-6(DelTGCCCAC)	0.6	1.1				
UTR-7 (InsTCATGAC)	11.9	18.4	1.675	1.023-2.740	4.266	0.039 <sup>b</sup>

<sup>a</sup>URSA vs. control group using the  $\chi^2$  test; <sup>b</sup>statistically significant. P<sub>Bonf</sub>, P-value calculated with Bonferroni correction for multiple comparisons; URSA, unexplained recurrent spontaneous abortion; UTR, untranslated region; Ins, insertion; Del, deletion; OR, odds ratio; CI, confidence interval.



Table SVI.Analyzed haplotype frequencies of the human leukocyte antigen-G 3'UTR in the primary URSA and control groups.

Haplotypes	Control, %	Primary URSA, %	OR	95% CI	$\chi^2$	P-value <sup>a</sup>
UTR-1 (DelTGCCCGC)	46.8	34.6	0.605	0.400-0.916	5.678	0.017 <sup>b</sup>
UTR-2 (InsTCCCGAG)	0.0	2.4				
UTR-3 (DelTCCCGAC)	33.8	42.6	1.539	1.017-2.328	4.187	0.041 <sup>b</sup>
UTR-4 (DelCGCCCAC)	1.2	1.6				
UTR-5 (InsTCCTGAC)	0.8	0.0				
UTR-6 (DelTGCCCAC)	0.6	0.0				
UTR-7(InsTCATGAC)	11.9	10.8	0.913	0.490-1.701	0.083	0.773

<sup>a</sup>URSA vs. control group using the  $\chi^2$  test; ; <sup>b</sup>statistically significant. P<sub>Bonf</sub>, P-value calculated with Bonferroni correction for multiple comparisons; URSA, unexplained recurrent spontaneous abortion; UTR, untranslated region; Ins, insertion; Del, deletion; OR, odds ratio; CI, confidence interval.

Table SVII. Analyzed haplotype frequencies of the human leukocyte antigenG 3'UTR in the secondary URSA and control groups.

Haplotypes	Control (%)	SecondaryURSA (%)	OR	95% CI	$\chi^2$	P-value <sup>a</sup>
UTR-1 (DelTGCCCGC)	46.8	26.0	0.376	0.224-0.631	14.198	<0.001 <sup>b</sup>
UTR-2 (InsTCCCGAG)	0.0	0.0				
UTR-3 (DelTCCCGAC)	33.8	32.0	0.901	0.546-1.486	0.167	0.683

UTR-4 (DelCGCCCAC)	1.2	0.0				
UTR-5 (InsTCCTGAC)	0.8	0.0				
UTR-6 (DelTGCCCAC)	0.6	3.0				
UTR-7 (InsTCATGAC)	11.9	25.0	2.452	1.354-4.441	9.106	0.003 <sup>b</sup>

<sup>a</sup>URSA vs. control group using the  $\chi^2$  test; <sup>b</sup>statistically significant. P<sub>Bonf</sub>, P-value calculated with Bonferroni correction for multiple comparisons; URSA, unexplained recurrent spontaneous abortion; UTR, untranslated region; Ins, insertion; Del, deletion; OR, odds ratio; CI, confidence interval.