

Multiple gene mutations identified in patients infected with influenza A (H7N9) virus

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Table S1. The 89 exonic SNVs and their mutation rate in various groups.

Gene	Chr	Pos	Ref	Alt	Fun	Exonic Func	1000 Genome	Inhouse	dbSNP	P1	P2	P3	P4	P5	P6	P7	P8	case Ref	case Alt	con Ref	con Alt	Fisher Exact Test P-value
CPT2	chr 1	53679028	G	A	exonic	nonsynonymous SNV		0.0008		-	-	-	-	-	het:3 2,36	-	-	15	1	1599	1	0.019710021
LEP	chr 7	127892124	A	G	exonic	nonsynonymous SNV	0.0005	0.0024	rs148407750	-	-	-	-	-	het:6 7,61	-	-	15	1	1597	3	0.039055387
DNMT1	chr 19	10251572	G	C	exonic	synonymous SNV	0.0037	0.0072	rs144675407	-	-	-	-	-	-	het:2 9,20	15	1	1589	11	0.112914886	
IL1B	chr 2	113590390	G	A	exonic	synonymous SNV	0.15	0.0144	rs1143634	-	-	-	het:3 0,24	-	-	-	-	15	1	1577	23	0.213791053
TLR2	chr 4	154625259	A	G	exonic	synonymous SNV	0.0023	0.0239	rs144038898	-	-	-	-	het:3 0,42	-	-	-	15	1	1562	38	0.32478413
CES1	chr 16	55855361	G	T	exonic	nonsynonymous SNV	0.04	0.0311	rs2307227	-	-	-	-	-	het:2 5,13	-	-	15	1	1551	49	0.396649049
IL1B	chr 2	113591114	G	A	exonic	synonymous	0.01	0.0335	rs140794289	-	-	-	-	-	-	het:2 0,13	-	15	1	1547	53	0.420954673

DQB1	6	2647			nic	onynous SNV			390				0,7								7012	
HLA-DQB1	chr 6	3263 2688	T	A	exonic	nonsynonymous SNV	0.2	0.0789	rs1071 637	-	-	-	hom: 0,10	-	-	-	-	14	2	1474	126	0.36575 7012
HLA-DQB1	chr 6	3263 4313	C	G	exonic	nonsynonymous SNV	0.21	0.0885	rs1049 059	-	-	-	hom: 0,16	-	-	-	-	14	2	1459	141	0.64622 3667
LEPR	chr 1	6606 7109	T	C	exonic	synonymous SNV	0.19	0.0957	rs1805 134	-	-	-	het:3 3,29	-	-	-	-	15	1	1447	153	1
HLA-DQB1	chr 6	3263 4369	C	A	exonic	nonsynonymous SNV	0.21	0.0981	rs1049 056	-	-	-	hom: 0,12	-	-	-	-	14	2	1444	156	0.66499 5324
HLA-DQB1	chr 6	3263 2820	C	G	exonic	nonsynonymous SNV	0.22	0.11	rs1130 375	-	-	hom: 0,8	-	-	-	-	-	14	2	1424	176	0.69352 4126
HLA-DQB1	chr 6	3263 2770	A	G	exonic	nonsynonymous SNV	0.28	0.1124	rs1049 069	-	-	-	hom: 0,6	-	-	-	-	14	2	1421	179	0.69801 6409
CES1	chr 16	5586 2762	C	G	exonic	synonymous SNV		0.1124	rs3826 194	-	-	-	-	-	het:2 8,7	-	-	15	1	1421	179	1
ABC B1	chr 7	8716 0618	A	T	exonic	nonsynonymous SNV		0.1244	rs2032 582	-	-	-	-	-	-	-	het:4 7,47	15	1	1401	199	0.70943 5825

HLA-DQB1	chr 6	32629868	A	G	exonic	synonymous SNV	0.18	0.134	rs1049088	-	-	-	hom:0,23	-	-	-	-	14	2	1386	214	1
CRP	chr 1	159683438	C	G	exonic	synonymous SNV	0.04	0.1364	rs1800947	-	-	-	-	het:54,45	-	het:47,52	-	14	2	1382	218	1
CPT2	chr 1	53679229	A	G	exonic	nonsynonymous SNV	0.13	0.1368	rs1799822	-	het:5,19	-	-	het:24,22	-	-	-	14	2	1382	218	1
HLA-DQB1	chr 6	32632745	G	A	exonic	nonsynonymous SNV	0.33	0.1388	rs1063318	-	-	-	hom:0,11	-	-	-	-	14	2	1378	222	1
HLA-DQA1	chr 6	32609195	G	A	exonic	nonsynonymous SNV	0.09	0.1675	rs36219699	-	-	hom:0,30	-	-	-	-	-	14	2	1332	268	1
IL1A	chr 2	113537223	C	A	exonic	nonsynonymous SNV	0.2	0.1675	rs17561	-	-	-	het:30,24	het:14,21	-	het:20,30	-	13	3	1332	268	0.740919053
HLA-DQB1	chr 6	32629963	C	T	exonic	nonsynonymous SNV	0.2	0.177	rs1049100	-	-	-	hom:0,21	-	-	-	-	14	2	1317	283	0.752136224
MX1	chr 21	42812891	C	T	exonic	synonymous SNV	0.36	0.177	rs467960	-	-	het:29,36	-	-	-	-	-	15	1	1317	283	0.332738289
CES1	chr 16	55862691	G	A	exonic	nonsynonymous	0.38	0.1794	rs62028647	-	-	-	-	-	het:28,7	-	-	15	1	1313	287	0.332096782

M3	1	49			nic	mous SNV			3885			7,14										5157
HLA-DQA1	chr 6	3260 9173	C	G	exo nic	nonsyn onymo us SNV	0.4	0.2656	rs1009 3	-	-	-	hom: 0,36	-	-	-	-	14	2	1176	424	0.26404 7871
HLA-DQB1	chr 6	3262 9904	A	G	exo nic	synony mous SNV	0.6	0.2656	rs1049 086	-	-	hom: 0,7	-	-	-	-	-	14	2	1176	424	0.26404 7871
HLA-DQA1	chr 6	3260 9147	A	T	exo nic	nonsyn onymo us SNV	0.19	0.2679	rs1272 2051	-	-	hom: 0,36	-	-	-	-	-	14	2	1172	428	0.26299 5374
HLA-DQA1	chr 6	3261 0436	T	C	exo nic	synony mous SNV	0.61	0.2679	rs1048 372	-	-	-	hom: 0,32	-	-	-	-	14	2	1172	428	0.26299 5374
HLA-DQA1	chr 6	3261 0535	A	C	exo nic	synony mous SNV	0.57	0.2703	rs11301 16	-	-	hom: 0,52	-	-	-	-	-	14	2	1168	432	0.26218 8523
HLA-DQA1	chr 6	3260 9813	T	C	exo nic	synony mous SNV	0.66	0.2919	rs7079 51	-	-	hom: 0,25	-	-	-	-	-	14	2	1133	467	0.17478 2886
PPAR G	chr 3	1247 5557	C	T	exo nic	synony mous SNV	0.12	0.3086	rs3856 806	het:3 9,31	-	-	-	het:2 5,33	-	-	het:3 3,22	13	3	1107	493	0.41714 3794
IFIT M3	chr1 1	3207 72	A	G	exo nic	synony mous SNV	0.21	0.3101	rs1225 2	-	hom: 0,119	-	hom: 0,114	-	hom: 0,99	het:5 7,60	het:6 5,65	8	8	1104	496	0.11020 9014

HLA-DRB1	chr 6	32549596	T	C	exonic	nonsynonymous SNV		0.311	rs111823233	-	-	-	hom:0,7	-	-	-	-	14	2	1103	497	0.171375278
MX1	chr 21	42821113	T	C	exonic	synonymous SNV	0.35	0.3278	rs2070229	hom:0,83	hom:1,80	-	-	hom:0,78	-	het:53,41	-	9	7	1076	524	0.422944246
TLR3	chr 4	187004074	C	T	exonic	nonsynonymous SNV	0.25	0.3324	rs3775291	hom:0,68	het:32,20	-	hom:0,43	hom:1,44	-	hom:0,50	het:27,31	6	10	1069	531	0.028998842
HLA-DQB1	chr 6	32629859	A	G	exonic	synonymous SNV	0.65	0.3421	rs1049130	-	-	hom:0,4	hom:0,22	-	-	-	-	12	4	1053	547	0.59863218
HLA-DQB1	chr 6	32629847	A	G	exonic	synonymous SNV	0.8	0.3541	rs1049133	-	-	hom:0,4	hom:0,17	-	-	-	-	12	4	1034	566	0.444388806
GHR L	chr 3	10331457	G	T	exonic	nonsynonymous SNV	0.09	0.3612	rs696217	-	hom:0,76	-	-	-	-	het:51,52	-	13	3	1023	577	0.194240734
TLR3	chr 4	187004217	C	T	exonic	synonymous SNV	0.28	0.3702	rs3775290	-	-	het:38,33	-	-	het:31,28	-	het:33,44	13	3	1008	592	0.192232214
DNM T1	chr 19	10291181	T	C	exonic	nonsynonymous SNV	0.06	0.3756	rs16999593	het:54,43	-	het:53,30	-	het:52,53	-	het:45,55	-	12	4	1000	600	0.437380251
HLA-DQA1	chr 6	32610461	A	G	exonic	nonsynonymous	0.78	0.4115	rs9260	-	-	hom:0,41	hom:0,31	-	-	-	-	12	4	942	658	0.21390613

B1	7	0618			nic	onymo us SNV			582	6,44	4,45	8,40	3,42	5,39		5,41						5592
MX1	chr 21	4282 4661	A	G	exo nic	synony mous SNV	0.27	0.5215	rs1050 008	-	-	het:8 9,85	het:7 7,71	-	het:6 7,64	het:7 8,75	-	12	4	766	834	0.04206 6821
IFNA R1	chr 21	3471 5699	G	C	exo nic	nonsyn onymo us SNV	0.21	0.5239	rs2257 167	-	-	hom: 0,80	het:4 9,45	-	het:5 7,54	-	het:5 4,59	11	5	762	838	0.12991 9992
DNM T1	chr 19	1027 3372	T	C	exo nic	nonsyn onymo us SNV	0.18	0.5383	rs2228 612	het:1 9,21	-	het:2 8,24	het:2 0,22	het:2 2,20	-	het:2 1,31	-	11	5	739	861	0.08161 176
RPAI N	chr 17	5326 145	C	G	exo nic	nonsyn onymo us SNV	0.43	0.6017	rs1276 1	hom: 0,24	hom: 0,24	hom: 0,27	het:1 3,10	hom: 0,34	hom: 0,20	hom: 0,25	het:2 3,12	2	14	638	962	0.03650 0478
LEPR	chr 1	6610 2257	G	A	exo nic	synony mous SNV	0.54	0.61	rs1805 096	hom: 0,104	het:6 2,34	het:5 3,38	hom: 0,105	hom: 0,104	het:4 1,38	hom: 0,122	hom: 0,112	3	13	624	976	0.12383 3455
DNM T1	chr 19	1026 7077	T	C	exo nic	synony mous SNV	0.54	0.6388	rs2228 611	het:2 8,27	hom: 0,70	het:2 8,30	het:3 2,34	hom: 0,58	hom: 0,42	hom: 0,62	hom: 0,47	3	13	578	102 2	0.19402 3134
MBL2	chr 10	5452 8266	G	C	exo nic	synony mous SNV	0.77	0.6388	rs9305 07	hom: 0,85	hom: 0,88	het:4 4,41	hom: 0,75	het:4 5,55	hom: 0,60	hom: 0,97	het:4 2,47	3	13	578	102 2	0.19402 3134
ABC B1	chr 7	8713 8645	A	G	exo nic	synony mous SNV	0.6	0.6507	rs1045 642	het:5 8,43	het:3 5,39	het:4 9,39	het:4 8,52	het:3 7,30	-	het:4 2,47	het:3 6,43	9	7	559	104 1	0.11099 8732

CPT2	chr 1	5367 6448	G	A	exo nic	nonsyn onyno us SNV	0.5	0.669	rs1799 821	hom: 0,38	hom: 0,35	het:2 6,22	hom: 0,42	het:1 1,21	hom: 0,39	hom: 0,49	hom: 0,54	2	14	530	107 0	0.10797 6012
NOS3	chr 7	1506 9572 6	T	C	exo nic	synony mous SNV	0.78	0.6699	rs1549 758	hom: 0,8	-	-	-	hom: 0,10	-	hom: 0,7	hom: 0,7	8	8	529	107 1	0.18294 7056
LEPR	chr 1	6605 8513	A	G	exo nic	nonsyn onyno us SNV	0.59	0.6986	rs1137 101	hom: 0,53	hom: 0,46	het:3 5,25	hom: 0,60	hom: 0,42	het:2 5,24	hom: 0,50	hom: 0,48	2	14	483	111 7	0.17154 7862
DNM T1	chr 19	1026 5312	T	C	exo nic	synony mous SNV	0.99	0.7297	rs7211 86	hom: 0,39	hom: 0,32	hom: 0,38	hom: 0,32	hom: 0,34	hom: 0,23	hom: 0,47	hom: 0,38	0	16	433	116 7	0.00938 611
LEPR	chr 1	6603 6441	A	G	exo nic	nonsyn onyno us SNV	0.39	0.7344	rs1137 100	hom: 0,63	hom: 0,57	het:1 8,34	het:4 2,29	hom: 0,82	het:1 3,35	hom: 0,47	het:2 7,44	4	12	425	117 5	1
IL10R B	chr 21	3464 0788	A	G	exo nic	nonsyn onyno us SNV	0.35	0.7392	rs2834 167	hom: 0,37	hom: 0,59	het:3 3,18	het:2 6,20	het:1 9,24	hom: 0,46	hom: 0,48	het:2 0,36	4	12	418	118 2	1
ZNF3 65	chr 10	6415 9333	G	T	exo nic	nonsyn onyno us SNV	0.49	0.7967	rs3758 490	het:5 9,61	het:6 9,57	het:8 8,56	het:5 6,60	hom: 0,119	hom: 0,98	hom: 0,102	-	6	10	326	127 4	0.11468 297
NOS3	chr 7	1506 96111	T	G	exo nic	nonsyn onyno us SNV	0.8	0.8732	rs1799 983	hom: 0,52	hom: 0,49	het:4 4,43	hom: 0,63	hom: 0,57	het:3 0,32	hom: 0,64	hom: 0,52	2	14	203	139 7	1
ZNF3 65	chr 10	6441 5184	A	G	exo nic	nonsyn onyno	0.85	0.9115	rs7076 156	hom: 0,59	hom: 0,40	hom: 0,58	hom: 0,41	hom: 0,45	hom: 0,48	hom: 0,51	het:2 6,27	1	15	142	145 8	1

						us SNV																
DNM T1	chr 19	1026 5333	A	G	exonic	synonymous SNV		-		het:1 8,19	-	-	-	-	-	-	-	15	1	1600	0	0.00990 099
DNM T1	chr 19	1026 5372	C	T	exonic	synonymous SNV	0.0005	-	rs1403 76680	-	-	-	-	het:1 5,16	-	-	-	15	1	1600	0	0.00990 099
PPARG	chr 3	1247 5632	G	A	exonic	synonymous SNV		-		-	-	-	-	het:2 4,15	-	-	-	15	1	1600	0	0.00990 099
CES1	chr 16	5584 4509	T	C	exonic	nonsynonymous SNV		-		-	-	-	-	het:9 1,60	-	-	-	15	1	1600	0	0.00990 099
TLR4	chr 9	1204 7089 4	C	G	exonic	synonymous SNV		-		-	-	het:5 6,52	-	-	-	-	-	15	1	1600	0	0.00990 099