

## Supplementary Data

SUPPLEMENTARY TABLE S1. ASSOCIATIONS OF OBSCN POLYMORPHISMS WITH FORCED EXPIRATORY VOLUME IN 1 s DECLINE BY ASPIRIN PROVOCATION IN TOTAL ASTHMATICS

SNP (AA change)	Position	Genotype distribution			Pa	Pb	Pc
		C/C	C/R	R/R			
rs10157526A>G	Intron 8	413 (9.52±12.89)	166 (8.56±14.17)	13 (8.84±11.60)	0.58	0.59	0.79
rs10916282C>A	Intron 8	414 (9.53±12.88)	165 (8.52±14.20)	13 (8.84±11.60)	0.55	0.56	0.79
rs12063816A>G	Intron 8	481 (9.38±13.10)	106 (8.49±13.72)	4 (12.75±18.19)	0.85	0.78	0.68
rs1757157T>C	Intron 8	294 (8.96±13.97)	255 (9.69±12.74)	43 (8.39±10.62)	0.97	0.66	0.45
rs17640616G>C	Intron 8	518 (9.39±13.19)	73 (8.23±13.55)	1 (0.00)	0.33	0.36	0.57
rs1757149T>C	Intron 9	244 (9.97±12.55)	276 (8.65±13.62)	72 (8.98±13.90)	0.41	0.32	0.86
rs1629294T>G	Intron 9	228 (9.83±12.18)	280 (8.62±13.45)	81 (9.88±15.33)	0.80	0.50	0.66
rs1771462C>G	Intron 9	243 (9.88±11.91)	275 (8.57±13.78)	74 (9.55±15.11)	0.67	0.43	0.77
rs2776856T>C	Intron 9	232 (10.01±12.13)	278 (8.45±13.33)	82 (9.71±15.62)	0.67	0.37	0.67
rs2776855A>C	Intron 9	401 (9.50±12.94)	176 (8.73±14.12)	15 (8.10±9.88)	0.50	0.56	0.59
rs10916287C>T	Intron 9	399 (9.49±12.81)	176 (8.83±14.35)	17 (7.38±10.67)	0.56	0.70	0.45
rs11586055C>G	Intron 9	469 (9.31±13.06)	115 (8.89±14.12)	8 (9.73±10.22)	0.95	0.95	0.99
rs1771459G>A	Intron 9	250 (9.84±12.07)	270 (8.54±13.66)	72 (9.75±15.28)	0.73	0.45	0.66
rs1757133C>T	Intron 9	401 (9.50±12.94)	176 (8.73±14.12)	15 (8.10±9.88)	0.50	0.56	0.59
rs6701173G>A	Intron 9	339 (9.83±13.93)	229 (8.20±12.25)	24 (10.70±11.67)	0.45	0.27	0.54
rs3856331G>A	Intron 9	339 (9.83±13.93)	229 (8.20±12.25)	24 (10.70±11.67)	0.45	0.27	0.54
rs12077365T>C	Intron 11	399 (9.49±12.81)	176 (8.83±14.35)	17 (7.38±10.67)	0.56	0.70	0.45
rs1888680A>T	Intron 12	203 (8.59±13.55)	295 (9.08±13.31)	94 (11.08±12.16)	0.29	0.51	0.26
rs6426493G>A	Intron 12	198 (8.68±13.70)	295 (9.02±13.07)	99 (10.96±12.67)	0.34	0.59	0.27
rs1411912C>A	Intron 13	202 (8.61±13.58)	296 (9.07±13.28)	94 (11.08±12.16)	0.29	0.51	0.26
rs10158275G>T	Intron 14	190 (9.35±11.99)	318 (9.61±14.38)	83 (7.61±11.19)	0.64	0.81	0.23
rs4653544G>A	Intron 14	286 (9.01±13.92)	252 (9.25±12.77)	54 (10.37±11.53)	0.70	0.76	0.73
rs287606G>A	Intron 15	356 (9.76±13.93)	216 (8.18±12.02)	20 (11.28±12.38)	0.49	0.28	0.44
rs397637G>T	Intron 16	356 (9.76±13.93)	217 (8.20±11.99)	19 (11.24±12.72)	0.48	0.28	0.43
rs391597A>T	Intron 16	356 (9.76±13.93)	217 (8.20±11.99)	19 (11.24±12.72)	0.48	0.28	0.43
rs1108210A>C	Intron 16	397 (9.51±12.84)	177 (8.84±14.31)	18 (7.14±10.41)	0.52	0.67	0.39
rs878388G>A	Intron 16	204 (8.30±13.24)	299 (9.29±13.32)	89 (11.20±12.74)	0.16	0.27	0.24
rs549590T>C	Intron 17	354 (9.80±13.96)	219 (8.14±11.95)	19 (11.24±12.72)	0.42	0.23	0.43
rs424645C>T	Intron 17	348 (9.90±14.05)	225 (8.04±11.82)	19 (11.24±12.72)	0.34	0.18	0.43
rs1188722C>T (L2116F)	Exon 23	329 (8.24±12.83)	221 (10.06±13.56)	41 (12.96±13.84)	<b>0.03</b>	0.06	0.09
rs867599C>A	Intron 25	349 (8.56±12.79)	209 (10.09±13.87)	34 (10.92±13.45)	0.21	0.21	0.55
rs3795782T>C	Intron 27	384 (9.33±12.58)	188 (9.37±14.71)	20 (6.18±10.16)	0.66	0.94	0.26
rs11581037C>G	Intron 28	476 (9.36±13.23)	108 (8.65±13.43)	8 (9.73±10.22)	0.79	0.77	0.99
rs12061320G>A (V2648V)	Exon 31	269 (9.61±13.13)	262 (8.92±13.46)	61 (8.94±12.70)	0.57	0.57	0.76
rs3795785C>T (R2812W)	Exon 32	301 (9.05±12.66)	247 (9.46±14.01)	44 (9.21±12.61)	0.84	0.75	0.88
rs1150906G>T	Intron 33	346 (9.98±14.05)	223 (8.08±11.85)	23 (9.22±12.58)	0.22	0.14	0.89
rs3795790A>T (S3373C)	Exon 39	266 (9.48±12.92)	260 (8.88±13.44)	61 (8.94±12.70)	0.65	0.64	0.81
rs4653938C>G	Intron 39	163 (9.04±14.15)	286 (8.79±12.90)	143 (10.34±12.78)	0.46	0.88	0.28
rs1150909C>T	Intron 43	328 (8.41±13.01)	222 (9.79±13.34)	41 (13.08±13.76)	0.06	0.13	0.08
rs1150910C>T	Intron 44	347 (9.94±14.04)	224 (8.10±11.82)	21 (9.65±13.10)	0.26	0.16	0.77
rs207951A>T	Intron 50	327 (8.34±12.98)	223 (9.87±13.39)	42 (12.77±13.73)	0.05	0.11	0.11
rs2087121G>A	Intron 50	164 (9.02±14.10)	283 (8.75±12.90)	145 (10.40±12.82)	0.43	0.86	0.25
rs1188729G>C (C4642S)	Exon 54	328 (8.41±13.01)	223 (9.74±13.33)	41 (13.08±13.76)	0.06	0.14	0.08
rs6700528G>A	Intron 57	186 (9.78±12.78)	290 (9.08±13.23)	116 (8.75±13.95)	0.46	0.50	0.61
rs369909G>C (L5269V)	Exon 59	348 (9.94±14.02)	212 (7.60±11.23)	21 (9.65±13.10)	0.16	0.08	0.72
rs1188710C>G (E5891Q)	Exon 73	185 (8.16±12.20)	310 (9.50±13.97)	96 (10.48±12.63)	0.20	0.20	0.48
rs369252C>A	Intron 76	328 (8.42±13.01)	222 (9.58±13.22)	42 (13.72±14.21)	<b>0.04</b>	0.15	<b>0.03</b>
rs12096217G>A	Intron 76	481 (9.24±12.95)	103 (9.15±14.51)	8 (10.23±13.94)	0.92	0.96	0.83
rs729258C>T	Intron 77	333 (10.17±14.22)	233 (7.96±11.73)	26 (8.65±11.96)	0.14	0.08	0.99
rs3795811C>T	Intron 78	278 (9.42±13.00)	260 (8.97±13.52)	54 (9.54±13.10)	0.79	0.71	0.96
rs3795812A>G	Intron 79	322 (10.35±14.20)	240 (7.75±11.86)	29 (9.28±11.99)	0.11	0.05	0.82
rs3795814C>T	Intron 80	270 (9.48±12.90)	264 (9.05±13.66)	58 (8.93±12.84)	0.64	0.67	0.75
rs16848509C>T	Intron 81	185 (8.16±12.20)	311 (9.49±13.95)	96 (10.48±12.63)	0.20	0.20	0.48
rs11582927C>T	Intron 81	409 (9.47±13.05)	167 (8.44±13.77)	10 (7.61±7.77)	0.38	0.43	0.54
rs12061490A>G	Intron 81	278 (9.42±13.00)	259 (8.79±13.25)	55 (10.35±14.31)	0.98	0.71	0.56

Genotype distribution of each SNP is presented as the number of subjects (FEV1 decline%, mean±SEM).

p-Values are adjusted with initial diagnosed age, sex, smoking, atopy, and body mass index.

Bold values indicate the statistical significance ( $p < 0.05$ ).

C/C, C/R, and R/R indicate the homozygote of the common allele, and the heterozygote and homozygote of the rare allele, respectively.

Pa, Pb, and Pc indicate the p-value of co-dominant, dominant, and recessive models, respectively.

SNP, single-nucleotide polymorphism; AA, amino acid; FEV1, forced expiratory volume in 1 s; SEM, standard error of the mean.

SUPPLEMENTARY TABLE S2. ASSOCIATIONS OF *OBSCN* POLYMORPHISMS WITH FORCED EXPIRATORY VOLUME IN 1 s DECLINE BY ASPIRIN PROVOCATION IN ASPIRIN EXACERBATED RESPIRATORY DISEASE SUBJECTS

SNP (AA change)	Position	Genotype distribution			<i>P<sub>a</sub></i>	<i>P<sub>b</sub></i>	<i>P<sub>c</sub></i>
		C/C	C/R	R/R			
<i>rs10157526A&gt;G</i>	Intron8	119 (23.61±15.52)	39 (26.98±18.44)	5 (16.98±14.35)	0.58	0.32	0.36
<i>rs10916282C&gt;A</i>	Intron8	120 (23.55±15.47)	38 (27.26±18.60)	5 (16.98±14.35)	0.54	0.28	0.36
<i>rs12063816A&gt;G</i>	Intron8	134 (24.25±15.82)	28 (23.51±18.50)	1 (39.00)	0.81	0.95	0.36
<i>rs1757157T&gt;C</i>	Intron8	83 (23.74±18.08)	69 (25.54±13.92)	11 (19.42±15.53)	0.85	0.79	0.32
<i>rs17640616G&gt;C</i>	Intron8	145 (24.09±16.21)	18 (25.16±16.99)	.	0.76	0.76	.
<i>rs1757149T&gt;C</i>	Intron9	76 (23.11±14.38)	66 (25.79±17.65)	21 (23.26±18.34)	0.61	0.40	0.86
<i>rs1629294T&gt;G</i>	Intron9	71 (22.52±13.87)	66 (25.90±17.44)	26 (24.54±19.11)	0.34	0.23	0.81
<i>rs1771462C&gt;G</i>	Intron9	78 (22.01±13.39)	61 (27.35±17.93)	24 (23.37±19.43)	0.25	0.08	0.90
<i>rs2776856T&gt;C</i>	Intron9	77 (22.05±13.47)	59 (27.32±17.28)	27 (23.59±20.30)	0.25	0.09	0.97
<i>rs2776855A&gt;C</i>	Intron9	116 (23.92±15.08)	43 (25.45±19.45)	4 (19.24±13.42)	0.94	0.76	0.50
<i>rs10916287C&gt;T</i>	Intron9	116 (23.54±15.16)	42 (26.93±19.05)	5 (16.98±14.35)	0.53	0.28	0.36
<i>rs11586055C&gt;G</i>	Intron9	132 (24.16±15.37)	29 (24.82±20.08)	2 (18.93±21.31)	0.89	0.96	0.71
<i>rs1771459G&gt;A</i>	Intron9	79 (22.32±13.57)	60 (27.04±17.91)	24 (23.37±19.43)	0.32	0.13	0.90
<i>rs1757133C&gt;T</i>	Intron9	116 (23.92±15.08)	43 (25.45±19.45)	4 (19.24±13.42)	0.94	0.76	0.50
<i>rs6701173G&gt;A</i>	Intron9	97 (25.49±16.59)	58 (22.39±15.97)	8 (21.91±14.20)	0.29	0.26	0.75
<i>rs3856331G&gt;A</i>	Intron9	97 (25.49±16.59)	58 (22.39±15.97)	8 (21.91±14.20)	0.29	0.26	0.75
<i>rs12077365T&gt;C</i>	Intron11	116 (23.54±15.16)	42 (26.93±19.05)	5 (16.98±14.35)	0.53	0.28	0.36
<i>rs1888680A&gt;T</i>	Intron12	54 (23.43±18.20)	75 (25.45±16.29)	34 (22.71±12.73)	0.77	0.78	0.40
<i>rs6426493G&gt;A</i>	Intron12	54 (23.43±18.20)	74 (25.18±16.22)	35 (23.37±13.14)	0.89	0.78	0.57
<i>rs1411912C&gt;A</i>	Intron13	54 (23.43±18.20)	75 (25.45±16.29)	34 (22.71±12.73)	0.77	0.78	0.40
<i>rs10158275G&gt;T</i>	Intron14	51 (23.96±13.63)	93 (24.77±17.97)	19 (22.14±14.25)	0.92	0.67	0.68
<i>rs4653544G&gt;A</i>	Intron14	81 (23.76±17.96)	65 (25.15±14.92)	17 (22.75±12.80)	0.99	0.74	0.61
<i>rs287606G&gt;A</i>	Intron15	100 (25.48±16.95)	56 (22.17±15.08)	7 (22.31±15.28)	0.27	0.24	0.79
<i>rs397637G&gt;T</i>	Intron16	100 (25.48±16.95)	56 (22.17±15.08)	7 (22.31±15.28)	0.27	0.24	0.79
<i>rs391597A&gt;T</i>	Intron16	100 (25.48±16.95)	56 (22.17±15.08)	7 (22.31±15.28)	0.27	0.24	0.79
<i>rs1108210A&gt;C</i>	Intron16	116 (23.54±15.16)	42 (26.93±19.05)	5 (16.98±14.35)	0.53	0.28	0.36
<i>rs878388G&gt;A</i>	Intron16	53 (23.13±17.84)	77 (25.38±16.52)	33 (23.22±12.84)	0.92	0.66	0.49
<i>rs549590T&gt;C</i>	Intron17	100 (25.48±16.95)	56 (22.17±15.08)	7 (22.31±15.28)	0.27	0.24	0.79
<i>rs424645C&gt;T</i>	Intron17	99 (25.74±16.84)	57 (21.79±15.23)	7 (22.31±15.28)	0.19	0.15	0.79
<i>rs1188722C&gt;T (L2116F)</i>	Exon23	87 (22.61±16.71)	56 (27.03±16.55)	20 (23.31±12.53)	0.54	0.25	0.64
<i>rs867599C&gt;A</i>	Intron25	93 (22.78±16.51)	56 (27.19±16.18)	14 (21.82±13.97)	0.62	0.27	0.43
<i>rs3795782T&gt;C</i>	Intron27	110 (23.40±14.70)	48 (26.91±19.43)	5 (16.19±13.47)	0.65	0.35	0.25
<i>rs11581037C&gt;G</i>	Intron28	134 (24.43±15.60)	27 (23.51±19.47)	2 (18.93±21.31)	0.61	0.64	0.71
<i>rs12061320G&gt;A (V2648V)</i>	Exon31	83 (23.10±15.56)	59 (27.19±17.36)	21 (20.24±14.94)	0.87	0.32	0.25
<i>rs3795785C&gt;T (R2812W)</i>	Exon32	87 (22.65±15.36)	59 (27.60±18.00)	17 (20.47±12.66)	0.54	0.16	0.35
<i>rs1150906G&gt;T</i>	Intron33	98 (25.99±16.73)	58 (21.43±15.34)	7 (22.31±15.28)	0.14	0.10	0.79
<i>rs3795790A&gt;T (S3373C)</i>	Exon39	82 (22.82±15.18)	58 (27.14±17.51)	21 (20.24±14.94)	0.77	0.25	0.29
<i>rs4653938C&gt;G</i>	Intron39	47 (23.66±18.31)	65 (26.48±15.93)	51 (21.82±14.46)	0.48	0.87	0.18
<i>rs1150909C&gt;T</i>	Intron43	88 (22.96±16.71)	55 (26.54±16.69)	20 (23.31±12.53)	0.67	0.36	0.64
<i>rs1150910C&gt;T</i>	Intron44	98 (25.99±16.73)	58 (21.43±15.34)	7 (22.31±15.28)	0.14	0.10	0.79
<i>rs207951A&gt;T</i>	Intron50	87 (22.88±16.79)	56 (26.60±16.55)	20 (23.31±12.53)	0.66	0.35	0.64
<i>rs2087121G&gt;A</i>	Intron50	47 (23.66±18.31)	64 (26.43±16.05)	52 (21.98±14.36)	0.49	0.87	0.19
<i>rs1188729G&gt;C (C4642S)</i>	Exon54	88 (22.96±16.71)	55 (26.54±16.69)	20 (23.31±12.53)	0.67	0.36	0.64
<i>rs6700528G&gt;A</i>	Intron57	58 (22.80±15.16)	71 (25.92±16.41)	34 (23.04±17.78)	0.68	0.37	0.76
<i>rs369909G&gt;C (L5269V)</i>	Exon59	98 (25.99±16.73)	53 (20.23±14.90)	7 (22.31±15.28)	0.09	0.05	0.85
<i>rs1188710C&gt;G (E5891Q)</i>	Exon73	51 (22.02±14.66)	80 (25.67±18.33)	32 (24.06±12.78)	0.61	0.29	0.73
<i>rs369252C&gt;A</i>	Intron76	88 (22.96±16.71)	54 (26.29±16.75)	21 (24.10±12.74)	0.60	0.36	0.79
<i>rs12096217G&gt;A</i>	Intron76	135 (23.85±15.56)	26 (25.59±20.05)	2 (30.90±11.46)	0.46	0.50	0.60
<i>rs729258C&gt;T</i>	Intron77	94 (26.70±16.62)	62 (20.66±15.30)	7 (22.31±15.28)	0.05	<b>0.03</b>	0.79
<i>rs3795811C&gt;T</i>	Intron78	84 (23.03±15.48)	61 (26.36±17.71)	18 (22.44±14.55)	0.59	0.30	0.62
<i>rs3795812A&gt;G</i>	Intron79	93 (26.49±16.59)	62 (20.92±15.59)	8 (23.28±14.41)	0.09	0.05	0.85
<i>rs3795814C&gt;T</i>	Intron80	83 (22.75±15.37)	62 (26.68±17.74)	18 (22.44±14.55)	0.48	0.20	0.62
<i>rs16848509C&gt;T</i>	Intron81	51 (22.02±14.66)	80 (25.67±18.33)	32 (24.06±12.78)	0.61	0.29	0.73
<i>rs11582927C&gt;T</i>	Intron81	118 (23.92±15.44)	39 (25.46±19.09)	3 (14.32±11.18)	0.88	0.85	0.23
<i>rs12061490A&gt;G</i>	Intron81	84 (23.03±15.48)	60 (25.90±17.48)	19 (24.12±15.91)	0.44	0.30	1.00

Genotype distribution of each SNP is presented as the number of subjects (FEV1 decline%, mean±SEM).

*p*-Values are adjusted with initial diagnosed age, sex, smoking, atopy, and body mass index.

Bold values indicate the statistical significance (*p*<0.05).

C/C, C/R, and R/R indicate the homozygote of the common allele, and the heterozygote and homozygote of the rare allele, respectively.

*P<sub>a</sub>*, *P<sub>b</sub>*, and *P<sub>c</sub>* indicate the *p*-value of co-dominant, dominant, and recessive models, respectively.

SUPPLEMENTARY TABLE 3. ASSOCIATIONS OF *OBSCN* POLYMORPHISMS WITH FORCED EXPIRATORY VOLUME IN 1 s DECLINE BY ASPIRIN PROVOCATION IN ASPIRIN-TOLERANT ASTHMA SUBJECTS

SNP (AA change)	Position	Genotype distribution			<i>Pa</i>	<i>Pb</i>	<i>Pc</i>
		C/C	C/R	R/R			
<i>rs10157526A</i> > G	Intron8	294 (3.81 ± 4.82)	127 (2.91 ± 4.82)	8 (3.75 ± 6.00)	0.19	0.14	0.91
<i>rs10916282C</i> > A	Intron8	294 (3.81 ± 4.82)	127 (2.91 ± 4.82)	8 (3.75 ± 6.00)	0.19	0.14	0.91
<i>rs12063816A</i> > G	Intron8	347 (3.63 ± 4.82)	78 (3.10 ± 5.01)	3 (4.00 ± 6.08)	0.55	0.50	0.86
<i>rs1757157T</i> > C	Intron8	211 (3.15 ± 4.96)	186 (3.81 ± 4.81)	32 (4.60 ± 4.13)	0.05	0.09	0.16
<i>rs17640616G</i> > C	Intron8	373 (3.68 ± 4.79)	55 (2.69 ± 5.21)	1 (0.00)	0.12	0.13	0.58
<i>rs1757149T</i> > C	Intron9	168 (4.03 ± 4.73)	210 (3.26 ± 5.04)	51 (3.10 ± 4.34)	0.12	0.10	0.50
<i>rs1629294T</i> > G	Intron9	157 (4.09 ± 4.82)	214 (3.29 ± 4.80)	55 (2.95 ± 5.17)	0.09	0.08	0.37
<i>rs1771462C</i> > G	Intron9	165 (4.15 ± 4.71)	214 (3.22 ± 4.89)	50 (2.92 ± 4.96)	0.06	0.05	0.35
<i>rs2776856T</i> > C	Intron9	155 (4.03 ± 4.75)	219 (3.36 ± 4.89)	55 (2.90 ± 4.91)	0.10	0.13	0.29
<i>rs2776855A</i> > C	Intron9	285 (3.63 ± 4.91)	133 (3.32 ± 4.81)	11 (4.05 ± 3.86)	0.67	0.54	0.72
<i>rs10916287C</i> > T	Intron9	283 (3.73 ± 4.85)	134 (3.15 ± 4.79)	12 (3.38 ± 5.61)	0.35	0.33	0.83
<i>rs11586055C</i> > G	Intron9	337 (3.49 ± 4.98)	86 (3.52 ± 4.36)	6 (6.67 ± 3.20)	0.49	0.75	0.12
<i>rs1771459G</i> > A	Intron9	171 (4.07 ± 4.81)	210 (3.25 ± 4.81)	48 (2.94 ± 5.05)	0.08	0.08	0.37
<i>rs1757133C</i> > T	Intron9	285 (3.63 ± 4.91)	133 (3.32 ± 4.81)	11 (4.05 ± 3.86)	0.67	0.54	0.72
<i>rs6701173G</i> > A	Intron9	242 (3.55 ± 4.90)	171 (3.39 ± 4.86)	16 (5.09 ± 3.76)	0.69	1.00	0.23
<i>rs3856331G</i> > A	Intron9	242 (3.55 ± 4.90)	171 (3.39 ± 4.86)	16 (5.09 ± 3.76)	0.69	1.00	0.23
<i>rs12077365T</i> > C	Intron11	283 (3.73 ± 4.85)	134 (3.15 ± 4.79)	12 (3.38 ± 5.61)	0.35	0.33	0.83
<i>rs1888680A</i> > T	Intron12	149 (3.21 ± 4.73)	220 (3.50 ± 4.99)	60 (4.50 ± 4.54)	0.13	0.29	0.14
<i>rs6426493G</i> > A	Intron12	144 (3.15 ± 4.78)	221 (3.62 ± 4.88)	64 (4.17 ± 4.88)	0.18	0.22	0.35
<i>rs1411912C</i> > A	Intron13	148 (3.20 ± 4.74)	221 (3.51 ± 4.99)	60 (4.50 ± 4.54)	0.12	0.27	0.14
<i>rs10158275G</i> > T	Intron14	139 (3.99 ± 4.66)	225 (3.34 ± 5.00)	64 (3.30 ± 4.73)	0.31	0.26	0.67
<i>rs4653544G</i> > A	Intron14	205 (3.18 ± 4.86)	187 (3.72 ± 4.94)	37 (4.68 ± 4.14)	0.07	0.13	0.12
<i>rs287606G</i> > A	Intron15	256 (3.62 ± 4.88)	160 (3.28 ± 4.85)	13 (5.34 ± 4.08)	0.90	0.75	0.19
<i>rs397637G</i> > T	Intron16	256 (3.62 ± 4.88)	161 (3.33 ± 4.88)	12 (4.78 ± 3.72)	0.98	0.75	0.38
<i>rs391597A</i> > T	Intron16	256 (3.62 ± 4.88)	161 (3.33 ± 4.88)	12 (4.78 ± 3.72)	0.98	0.75	0.38
<i>rs1108210A</i> > C	Intron16	281 (3.71 ± 4.84)	135 (3.21 ± 4.83)	13 (3.35 ± 5.38)	0.42	0.40	0.84
<i>rs878388G</i> > A	Intron16	151 (3.09 ± 4.70)	222 (3.70 ± 4.87)	56 (4.11 ± 5.11)	0.15	0.17	0.41
<i>rs549590T</i> > C	Intron17	254 (3.63 ± 4.89)	163 (3.31 ± 4.86)	12 (4.78 ± 3.72)	0.92	0.68	0.38
<i>rs424645C</i> > T	Intron17	249 (3.60 ± 4.92)	168 (3.37 ± 4.82)	12 (4.78 ± 3.72)	0.95	0.83	0.38
<i>rs1188722C</i> > T (L2116F)	Exon23	242 (3.07 ± 4.81)	165 (4.31 ± 4.82)	21 (3.11 ± 5.04)	0.09	<b>0.03</b>	0.64
<i>rs867599C</i> > A	Intron25	256 (3.39 ± 4.93)	153 (3.83 ± 4.61)	20 (3.29 ± 5.64)	0.69	0.51	0.67
<i>rs3795782T</i> > C	Intron27	274 (3.68 ± 4.90)	140 (3.36 ± 4.58)	15 (2.85 ± 6.37)	0.36	0.40	0.55
<i>rs11581037C</i> > G	Intron28	342 (3.45 ± 4.98)	81 (3.70 ± 4.32)	6 (6.67 ± 3.20)	0.29	0.48	0.12
<i>rs12061320G</i> > A (V2648V)	Exon31	186 (3.59 ± 4.95)	203 (3.61 ± 4.67)	40 (3.00 ± 5.35)	0.73	0.92	0.55
<i>rs3795785C</i> > T (R2812W)	Exon32	214 (3.52 ± 4.95)	188 (3.77 ± 4.64)	27 (2.13 ± 5.41)	0.62	0.92	0.15
<i>rs1150906G</i> > T	Intron33	248 (3.65 ± 4.88)	165 (3.39 ± 4.82)	16 (3.49 ± 4.86)	0.64	0.62	0.90
<i>rs3795790A</i> > T (S3373C)	Exon39	184 (3.54 ± 4.97)	202 (3.63 ± 4.67)	40 (3.00 ± 5.35)	0.81	0.97	0.56
<i>rs4653938C</i> > G	Intron39	116 (3.11 ± 4.99)	221 (3.59 ± 4.71)	92 (3.97 ± 5.00)	0.22	0.30	0.34
<i>rs1150909C</i> > T	Intron43	240 (3.07 ± 4.85)	167 (4.27 ± 4.77)	21 (3.34 ± 5.01)	0.08	<b>0.03</b>	0.82
<i>rs1150910C</i> > T	Intron44	249 (3.62 ± 4.85)	166 (3.45 ± 4.84)	14 (3.31 ± 5.16)	0.69	0.72	0.81
<i>rs207951A</i> > T	Intron50	240 (3.07 ± 4.85)	167 (4.26 ± 4.78)	22 (3.20 ± 4.93)	0.09	<b>0.03</b>	0.73
<i>rs2087121G</i> > A	Intron50	117 (3.14 ± 4.98)	219 (3.59 ± 4.72)	93 (3.93 ± 4.99)	0.26	0.35	0.38
<i>rs1188729G</i> > C (C4642S)	Exon54	240 (3.07 ± 4.85)	168 (4.24 ± 4.77)	21 (3.34 ± 5.01)	0.08	<b>0.03</b>	0.82
<i>rs6700528G</i> > A	Intron57	128 (3.88 ± 4.69)	219 (3.62 ± 4.83)	82 (2.83 ± 5.12)	0.16	0.38	0.15
<i>rs369909G</i> > C (L5269V)	Exon59	250 (3.64 ± 4.86)	159 (3.39 ± 4.90)	14 (3.31 ± 5.16)	0.61	0.62	0.80
<i>rs1188710C</i> > G (E5891Q)	Exon73	134 (2.89 ± 4.84)	230 (3.88 ± 4.95)	64 (3.68 ± 4.44)	0.18	0.08	0.86
<i>rs369252C</i> > A	Intron76	240 (3.09 ± 4.84)	168 (4.21 ± 4.78)	21 (3.34 ± 5.01)	0.10	<b>0.04</b>	0.82
<i>rs12096217G</i> > A	Intron76	346 (3.54 ± 4.80)	77 (3.59 ± 5.15)	6 (3.33 ± 4.23)	0.92	0.90	0.96
<i>rs729258C</i> > T	Intron77	239 (3.67 ± 4.88)	171 (3.35 ± 4.85)	19 (3.62 ± 4.64)	0.64	0.58	0.99
<i>rs3795811C</i> > T	Intron78	194 (3.53 ± 4.89)	199 (3.64 ± 4.73)	36 (3.08 ± 5.33)	0.89	0.93	0.65
<i>rs3795812A</i> > G	Intron79	229 (3.80 ± 4.83)	178 (3.16 ± 4.92)	21 (3.94 ± 4.52)	0.42	0.28	0.74
<i>rs3795814C</i> > T	Intron80	187 (3.59 ± 4.82)	202 (3.64 ± 4.83)	40 (2.84 ± 5.15)	0.65	0.92	0.41
<i>rs16848509C</i> > T	Intron81	134 (2.89 ± 4.84)	231 (3.88 ± 4.94)	64 (3.68 ± 4.44)	0.18	0.08	0.87
<i>rs11582927C</i> > T	Intron81	291 (3.61 ± 4.92)	128 (3.26 ± 4.75)	7 (4.73 ± 4.09)	0.68	0.54	0.56
<i>rs12061490A</i> > G	Intron81	194 (3.53 ± 4.89)	199 (3.64 ± 4.73)	36 (3.08 ± 5.33)	0.89	0.93	0.65

Genotype distribution of each SNP is presented as the number of subjects (FEV1 decline%, mean ± SEM).

*p*-Values are adjusted with initial diagnosed age, sex, smoking, atopy, and body mass index.

Bold values indicate the statistical significance (*p* < 0.05).

C/C, C/R, and R/R indicate the homozygote of the common allele, and the heterozygote and homozygote of the rare allele, respectively.

*Pa*, *Pb*, and *Pc* indicate the *p*-value of co-dominant, dominant, and recessive models, respectively.

SUPPLEMENTARY TABLE 4. ASSOCIATIONS OF *OBSCN* HAPLOTYPES WITH FORCED EXPIRATORY VOLUME IN 1 s DECLINE BY ASPIRIN PROVOCATION

Subject group	LD block	Haplotype	Haplotype distribution			<i>Pa</i>	<i>Pb</i>	<i>Pc</i>	
			-/-	-/+	+/+				
In total asthmatics	Block 1	<i>BL1_ht1</i>	376 (9.57±13.68)	200 (8.36±12.31)	16 (12.09±13.31)	0.76	0.51	0.34	
		<i>BL1_ht2</i>	445 (9.36±13.58)	137 (8.93±12.15)	10 (7.72±11.99)	0.51	0.59	0.49	
		<i>BL1_ht3</i>	476 (9.36±13.23)	108 (8.65±13.43)	8 (9.73±10.22)	0.79	0.77	0.99	
	Block 2	<i>BL2_ht1</i>	335 (8.51±13.13)	216 (9.62±13.17)	41 (13.08±13.76)	0.08	0.20	0.08	
		<i>BL2_ht2</i>	353 (9.88±13.94)	218 (8.15±11.97)	21 (9.65±13.10)	0.30	0.19	0.77	
		<i>BL2_ht3</i>	382 (9.42±13.48)	187 (8.74±12.60)	23 (10.15±14.29)	0.70	0.59	0.81	
	In AERD	Block 1	<i>BL1_ht1</i>	105 (24.87±16.93)	52 (23.00±14.98)	6 (23.20±16.55)	0.62	0.57	0.99
			<i>BL1_ht2</i>	124 (24.50±16.84)	35 (24.09±14.39)	4 (16.23±13.90)	0.49	0.67	0.31
			<i>BL1_ht3</i>	134 (24.43±15.60)	27 (23.51±19.47)	2 (18.93±21.31)	0.61	0.64	0.71
Block 2		<i>BL2_ht1</i>	90 (23.22±16.86)	53 (26.23±16.49)	20 (23.31±12.53)	0.80	0.50	0.64	
		<i>BL2_ht2</i>	98 (25.99±16.73)	58 (21.43±15.34)	7 (22.31±15.28)	0.14	0.10	0.79	
		<i>BL2_ht3</i>	110 (23.82±16.78)	43 (25.74±15.60)	10 (21.90±13.70)	0.84	0.62	0.65	
Block 1		<i>BL1_ht1</i>	271 (3.65±4.81)	148 (3.22±4.98)	10 (5.42±3.36)	0.86	0.57	0.24	
		<i>BL1_ht2</i>	321 (3.51±4.86)	102 (3.73±4.71)	6 (2.05±6.80)	0.95	0.81	0.50	
		<i>BL1_ht3</i>	342 (3.45±4.98)	81 (3.70±4.32)	6 (6.67±3.20)	0.29	0.48	0.12	
Block 2	<i>BL2_ht1</i>	245 (3.11±4.82)	163 (4.22±4.82)	21 (3.34±5.01)	0.09	<b>0.04</b>	0.82		
	<i>BL2_ht2</i>	255 (3.68±4.85)	160 (3.34±4.85)	14 (3.31±5.16)	0.51	0.51	0.81		
In ATA		<i>BL2_ht3</i>	272 (3.60±4.89)	144 (3.66±4.69)	13 (1.12±5.46)	0.41	0.72	0.10	

Haplotype distribution is presented as the number of subjects (FEV1 decline%, mean±SEM).

-/-, -/+ and +/+ are the distributions having none, one, and both of the indicated haplotype, respectively.

*p*-Values are adjusted with initial diagnosed age, sex, smoking, and atopy.

Bold values indicate the statistical significance ( $p < 0.05$ ).

*Pa*, *Pb*, and *Pc* indicate the *p*-value of co-dominant, dominant, and recessive models, respectively.

AERD, aspirin exacerbated respiratory disease; ATA, aspirin-tolerant asthma; LD, linkage disequilibrium.



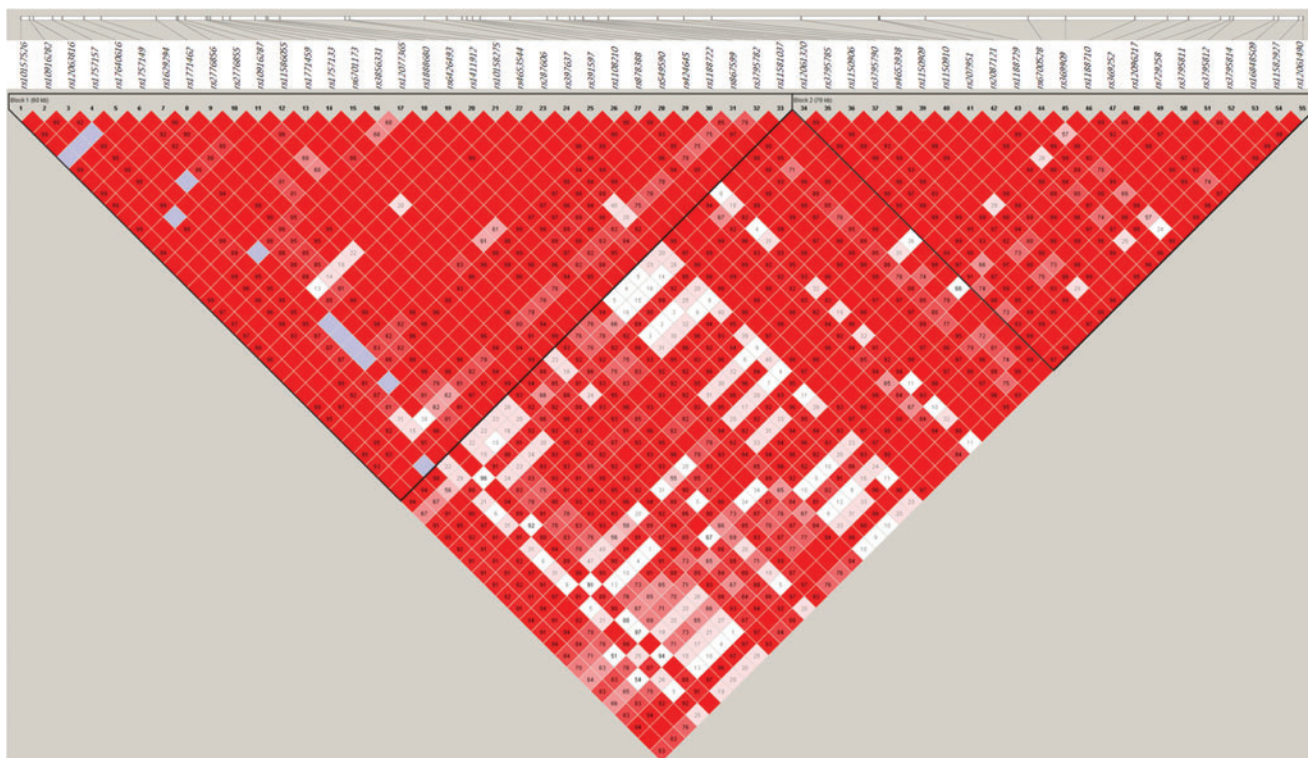
SUPPLEMENTARY TABLE 5. MINOR ALLELE FREQUENCIES OF *OBSCN* SINGLE-NUCLEOTIDE POLYMORPHISMS AMONG KOREAN ASTHMATICS AND OTHER ASIAN POPULATIONS

SNP (AA change)	Position	MAF		
		Korean asthmatics (n=592, this study)	Chinese (n=86)	Japanese (n=89)
rs10157526A>G	Intron8	0.165	0.173	0.128
rs10916282C>A	Intron8	0.165	0.189	0.144
rs12063816A>G	Intron8	0.101	0.133	0.089
rs1757157T>C	Intron8	0.288	0.395	0.267
rs17640616G>C	Intron8	0.064	0.054	0.087
rs1757149T>C	Intron9	0.355	0.321	0.337
rs1629294T>G	Intron9	0.375	0.333	0.343
rs1771462C>G	Intron9	0.358	0.341	0.262
rs2776856T>C <sup>a</sup>	Intron9	0.374	0.357	0.331
rs2776855A>C	Intron9	0.172	0.137	0.174
rs10916287C>T	Intron9	0.181	0.211	0.156
rs11586055C>G	Intron9	0.108	0.077	0.087
rs1771459G>A	Intron9	0.351	0.315	0.315
rs1757133C>T	Intron9	0.172	0.114	0.133
rs6701173G>A	Intron9	0.234	0.133	0.307
rs3856331G>A	Intron9	0.234	0.181	0.333
rs12077365T>C	Intron11	0.181	0.214	0.145
rs1888680A>T	Intron12	0.407	0.511	0.420
rs6426493G>A	Intron12	0.415	0.523	0.432
rs1411912C>A	Intron13	0.408	0.470	0.390
rs10158275G>T	Intron14	0.413	0.344	0.430
rs4653544G>A	Intron14	0.304	0.369	0.279
rs287606G>A	Intron15	0.216	0.167	0.276
rs397637G>T	Intron16	0.215	0.167	0.279
rs391597A>T	Intron16	0.215	0.067	0.263
rs1108210A>C	Intron16	0.185	0.216	0.174
rs878388G>A	Intron16	0.402	0.470	0.384
rs549590T>C	Intron17	0.216	0.161	0.285
rs424645C>T	Intron17	0.221	0.161	0.308
rs1188722C>T (L2116F) <sup>a</sup>	Exon23	0.258	0.321	0.256
rs867599C>A	Intron25	0.233	0.304	0.203
rs3795782T>C	Intron27	0.190	0.143	0.180
rs11581037C>G	Intron28	0.103	0.070	0.056
rs12061320G>A (V2648V)	Exon31	0.327	0.405	0.278
rs3795785C>T (R2812W)	Exon32	0.283	0.356	0.273
rs1150906G>T	Intron33	0.226	0.169	0.326
rs3795790A>T (S3373C)	Exon39	0.328	0.422	0.273
rs4653938C>G <sup>a</sup>	Intron39	0.483	0.556	0.420
rs1150909C>T <sup>a</sup>	Intron43	0.258	0.337	0.200
rs1150910C>T	Intron44	0.224	0.167	0.318
rs207951A>T <sup>a</sup>	Intron50	0.260	0.344	0.261
rs2087121G>A <sup>a</sup>	Intron50	0.484	0.488	0.471
rs1188729G>C (C4642S) <sup>a</sup>	Exon54	0.259	0.333	0.244
rs6700528G>A	Intron57	0.441	0.511	0.364
rs369909G>C (L5269V)	Exon59	0.218	0.100	0.330
rs1188710C>G (E5891Q)	Exon73	0.425	0.456	0.375
rs369252C>A <sup>a</sup>	Intron76	0.260	0.333	0.220
rs12096217G>A	Intron76	0.105	0.149	0.105
rs729258C>T	Intron77	0.240	0.185	0.320
rs3795811C>T	Intron78	0.312	0.333	0.297
rs3795812A>G	Intron79	0.251	0.190	0.326
rs3795814C>T	Intron80	0.321	0.339	0.302
rs16848509C>T	Intron81	0.425	0.464	0.372
rs11582927C>T	Intron81	0.158	0.125	0.169
rs12061490A>G	Intron81	0.312	0.333	0.297

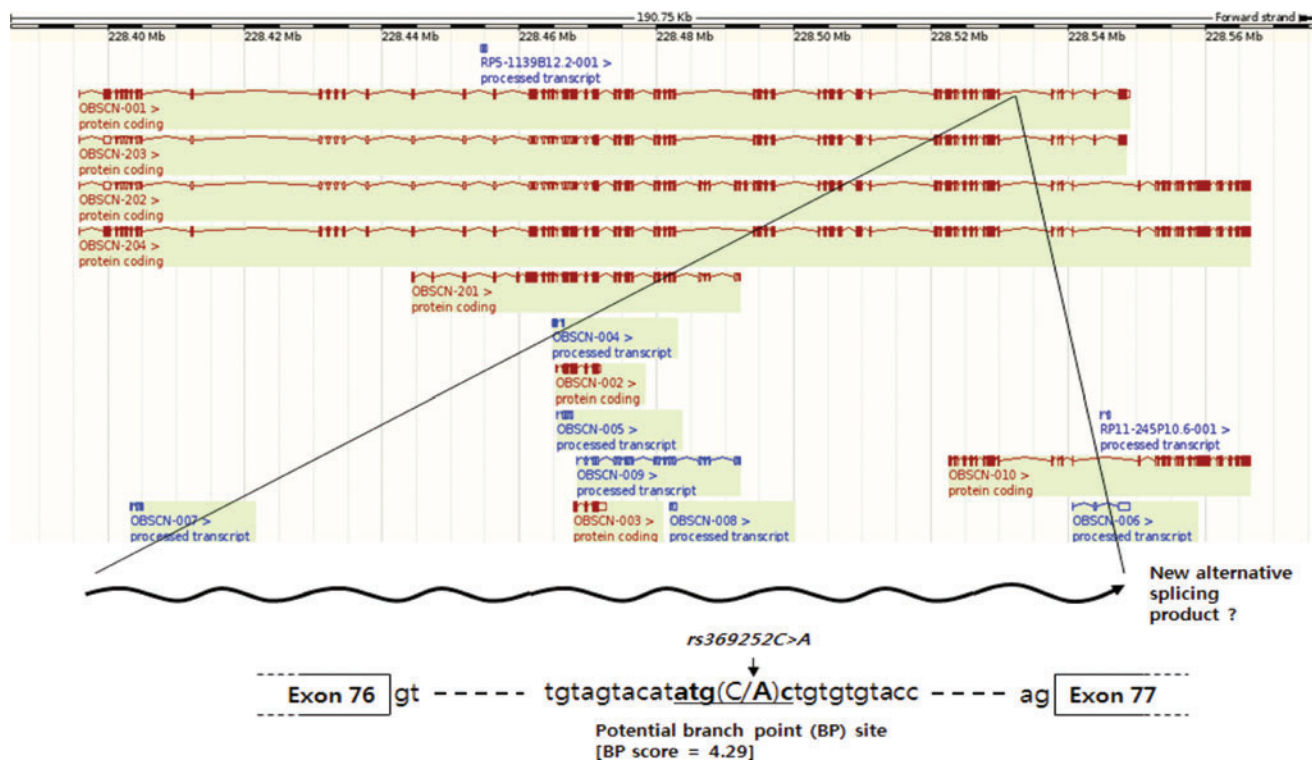
The MAFs of Chinese and Japanese are obtained from the International HapMap Project database (<http://hapmap.ncbi.nlm.nih.gov/index.html.en>).

<sup>a</sup>SNPs show significant associations with AERD in a comparison between Korean AERD patients and ATA subjects.

AA, amino acid; MAF, minor allele frequency.



**SUPPLEMENTARY FIG. S1.** Linkage disequilibrium (LD) plot of *OBSCN* polymorphisms investigated in this study. LD number in blocks represents values of multiallelic  $D'$ . Color scheme indicates logarithm of odds (LOD) score  $\geq 2$  and  $D'=1$  in bright red; LOD  $\geq 2$  and  $D' < 1$  in shades of pink/red; LOD  $< 2$  and  $D'=1$  in blue; LOD  $< 2$  and  $D' < 1$  in white.



**SUPPLEMENTARY FIG. S2.** *In silico* analysis of rs369252C>A for branch point (BP) site for alternative splicing. Prediction is performed using EMBL-EBI splice site prediction ([www.ebi.ac.uk/asd-srv/wb.cgi?method=2](http://www.ebi.ac.uk/asd-srv/wb.cgi?method=2)). Currently discovered alternative transcripts of *OBSCN* are derived from the Ensembl genome Browser ([www.ensembl.org/index.html](http://www.ensembl.org/index.html)).