

**Supplementary Table 2.** CNVs identified with asthma associated genes with their chromosomal location, break-points, CN states and gene functions

Gene	Chromosome location	Break-point (bp)	CN state	Gene function
ACAA1	3p22.2	38039344-38185174	3	Acetyl-coA C-acyltransferase activity
ACE	17q23.3	61518220-61624537	3	Actin binding
ADAM8	10q26.3	135056464-135174110	0, 3	Metalloendopeptidase activity
AICDA	12p13.31	8529380-8763073	1	Cytidinedeaminase activity
ALOX5	10q11.21	45827177-45940122	3	Arachidonate 5-lipoxygenase activity
BDNF	11p14.1	27636885-27789198	3	Growth factor activity
C14orf180	14q32.33	104938308-105067722	3	-
C5orf56	5q31.1	131721749-131825114	1	-
CCL11	17q12	31953738-32936539	3	Chemokine activity
CCL2	17q12	31957151-32938022	3	Chemokine activity
CCR1	3p21.31	46129533-46281822	1	Chemokine receptor activity
CCL3L1	17q12	34437116-34629684	0,1,3,4	Chemotactic for lymphocytes and monocytes
CD69	12p13.31	9879084-9993452	1	Transmembrane signaling receptor activity
CDK2	12q13.2	56297625-56413629	3	Cyclin-dependent protein serine/threonine kinase activity
CHRM3	1q43	239917246-240298870	3	G-protein coupled acetylcholine receptor activity
CSF2	5q31.1	131317464-131419202	3	Cytokine and growth factor activity
CTNNA3	10q21.3	68367662-68515140	1, 3	Cadherin binding
CXCL12	10q11.21	44860013-44975407	3	Cytokine and growth factor activity
CYSLTR1	Xq21.1	77513603-77753914	3	Leukotriene receptor activity
DIAPH3	13q21.2	60204504-60381540	1	Rho gtpase binding
DPP10	2q14.1	116532508-116675350	3	Serine-type peptidase activity
EGFR	7p11.2	55126900-55245507	3	Epidermal growth factor-activated receptor activity
GPX3	5q33.1	150399114-150513847	3	Glutathione peroxidase activity
GSTCD	4q24	106447752-106760931	1	-
GSTT1	22q11.23	24288422-24396802	0- 4	Glutathione peroxidase activity
HAVCR1	5q33.3	156409111-156564456	3	-
HAVCR2	5q33.3	156409111-156564456	3	-
HLA-DQA1	6p21.32	32456671-32625083	1	T cell receptor signaling pathway
HLA-DRA	6p21.32	32408527-32530286	4	T cell receptor signaling pathway
HLA-DRB1	6p21.32	32456671-32625083	1, 4	Peptide antigen binding
HLA-DRB5	6p21.32	32429894-32530286	1, 4	Peptide antigen binding
ICAM1	19p13.2	10369086-10471048	1	Transmembrane signaling receptor activity
IL13RA2	Xq23	114205618-114397728	2, 3	Cytokine receptor activity
IL17RB	3p21.1	53775447-53890848	3	Cytokine receptor activity
IL1A	2q13	113500222-113644927	1	Cytokine activity
IL1B	2q13	113512866-113644927	1	Cytokine activity
IL3	5q31.1	131317464-131419202	3	Cytokine activity
IL33	9p24.1	6121448-6256144	1	Cytokine activity
IL4R	16p12.1	27251081-27377242	1	Interleukin-4 receptor activity
IL8	4q13.3	74567500-74758477	1	Chemokine activity
IL9	5q31.1	135123627-135231195	3	Cytokine activity
IRF1	5q31.1	131721749-131825114	1	Sequence-specific DNA binding transcription factor activity
KCNIP4	4p15.2	21637793-21740358	3	Voltage-gated ion channel activity
LTA	6p21.33	31474688-31595882	1	Cytokine activity
MBL2	10q21.1	53511985-57787459	1	Calcium-dependent protein binding
MUC2	11p15.5	1073860-1332223	3	Protein binding
MUC5B	11p15.5	1150425-1291777	3, 4	Extracellular matrix structural constituent

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**Supplementary Table 2.** Continued

Gene	Chromosome location	Break-point (bp)	CN state	Gene function
NQO1	16q22.1	68860698-69771914	1	NAD(P)H dehydrogenase (quinone) activity
NRG1	8p12	32422268-32522771	3	Cytokine and growth factor activity
OPN3	1q43	241099314-242090693	3	G-protein coupled receptor activity
PIM1	6p21.2	37130282-37236436	3	Protein serine/threonine kinase activity
PRKG1	10q21.1	53511985-57787459	1	Calcium channel regulator activity
PTGER2	14q22.1	52788759-52902018	1	Prostaglandin E receptor activity
STAT3	17q21.2	40498189-40608285	1	Transcription regulatory region DNA binding
TBXA2R	19p13.3	3554783-3700847	3	Guanyl-nucleotide exchange factor activity
TIMP3	22q12.3	33142908-33251959	3	Metalloendopeptidase inhibitor activity
TLR2	4q31.3	154515618-154825256	3	Transmembrane signaling receptor activity
TNF	6p21.33	31480272-31654732	1	Cytokine activity
TNFAIP3	6q23.3	138092422-138206150	1	Ubiquitin-specific protease activity
TNS1	2q35	218600074-218709313	3	Actin and protein binding
ZNF618	9q32	116811184-116930194	3	DNA binding