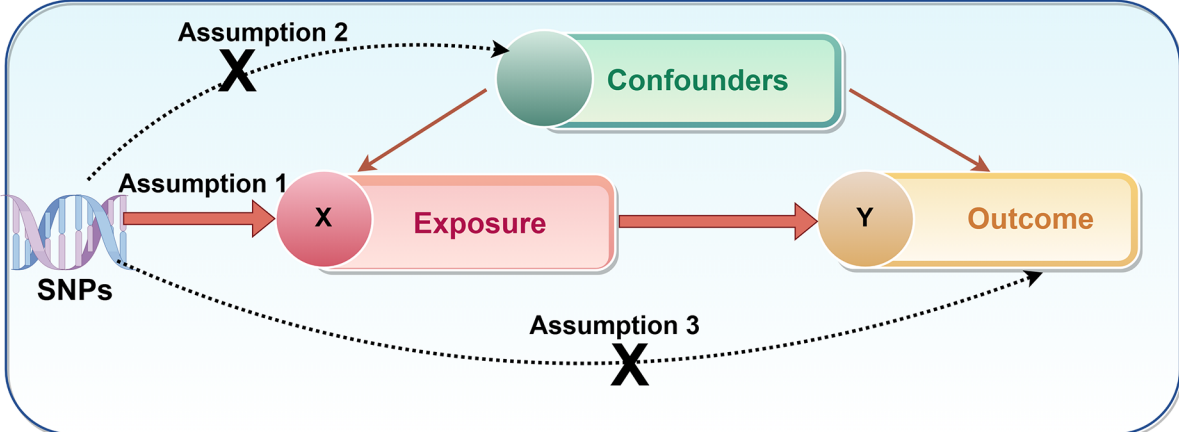
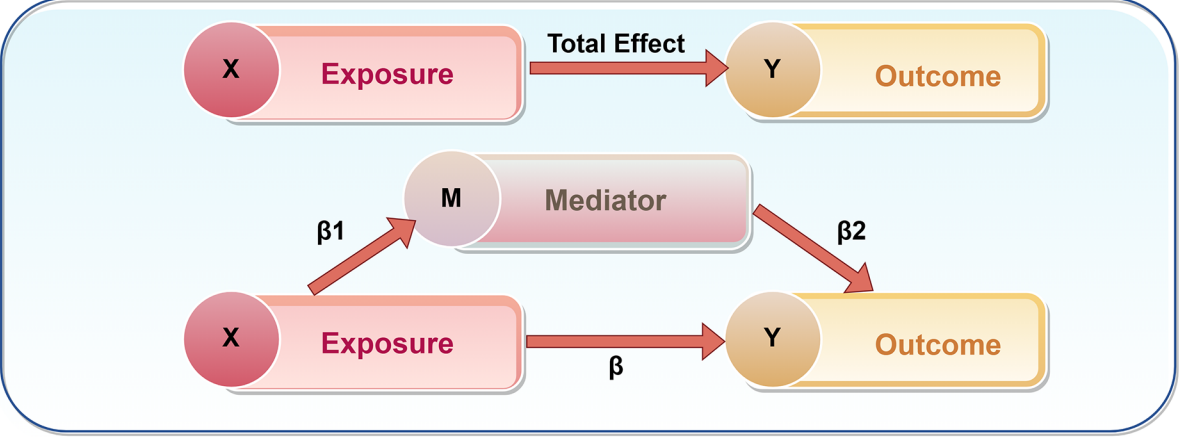


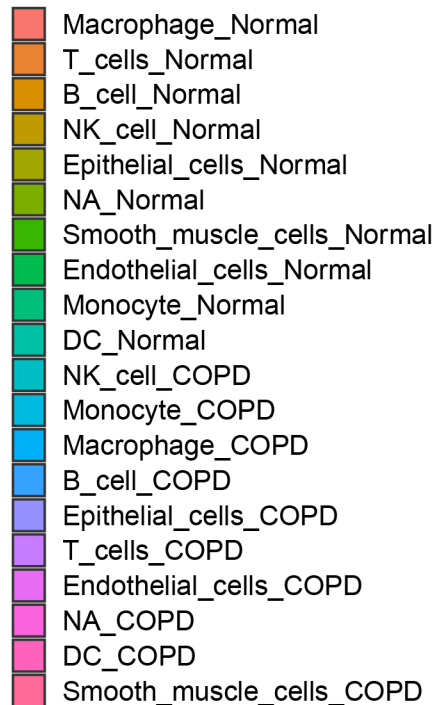
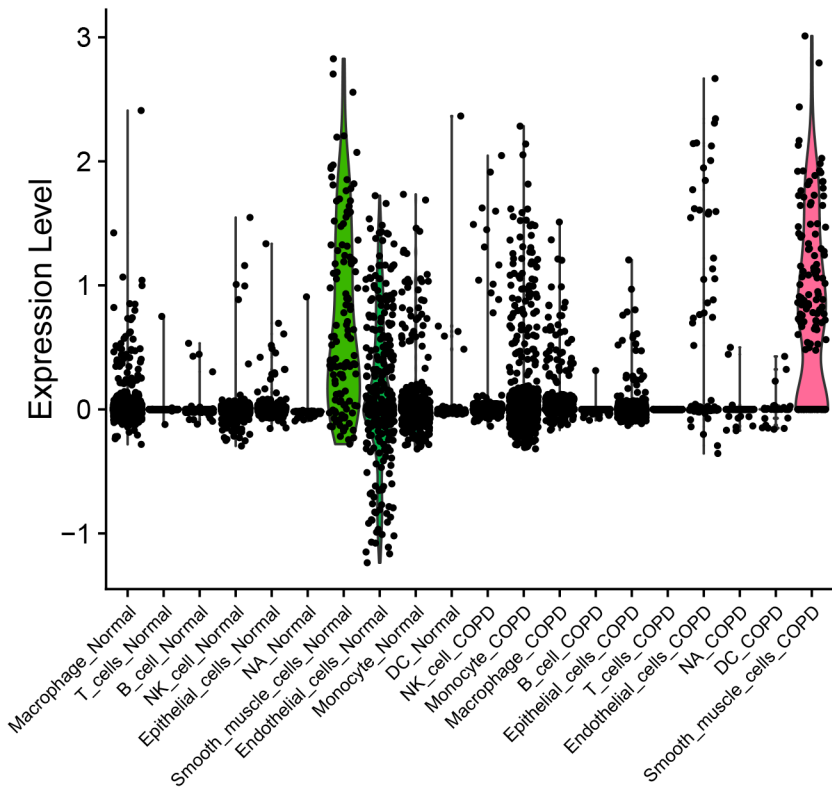
A



B



OAF



Identity

Table S1 731 immune cell phenotypes

Table S2 Marker genes in NK cells of COPD tissue

Table S3 MR results of Immune cells and COPD using the IVW method

Table S4 Results of the Mendelian MR for OAF, Immune Cells, and CO

Table S5 Results of the Mendelian MR for OAF, Immune Cells, and CO

|
PD
PD

Trait type	Panel	Statistical trait	Trait	GWAS Catalog	Acid
Relative count	B cell	BC_Trait1	IgD+ %B cell	GCST90001391	ebi-a-GC9
Absolute count	B cell	BC_Trait10	IgD+ CD38br A	GCST90001392	ebi-a-GC9
Relative count	B cell	BC_Trait11	IgD+ CD38dim	GCST90001393	ebi-a-GC9
Absolute count	B cell	BC_Trait12	IgD+ CD38dim	GCST90001394	ebi-a-GC9
Relative count	B cell	BC_Trait13	IgD+ CD38- %B	GCST90001395	ebi-a-GC9
Absolute count	B cell	BC_Trait14	IgD+ CD38- AC	GCST90001396	ebi-a-GC9
Relative count	B cell	BC_Trait17	Unsw mem %B	GCST90001397	ebi-a-GC9
Absolute count	B cell	BC_Trait18	Unsw mem AC	GCST90001398	ebi-a-GC9
Relative count	B cell	BC_Trait19	IgD- CD27- %B	GCST90001399	ebi-a-GC9
Absolute count	B cell	BC_Trait2	IgD+ AC	GCST90001400	ebi-a-GC9
Absolute count	B cell	BC_Trait20	IgD- CD27- AC	GCST90001401	ebi-a-GC9
Relative count	B cell	BC_Trait21	Sw mem %B ce	GCST90001402	ebi-a-GC9
Absolute count	B cell	BC_Trait22	Sw mem AC	GCST90001403	ebi-a-GC9
Relative count	B cell	BC_Trait23	PB/PC %B cell	GCST90001404	ebi-a-GC9
Absolute count	B cell	BC_Trait24	PB/PC AC	GCST90001405	ebi-a-GC9
Relative count	B cell	BC_Trait25	Memory B cell %	GCST90001406	ebi-a-GC9
Absolute count	B cell	BC_Trait26	Memory B cell	GCST90001407	ebi-a-GC9
Relative count	B cell	BC_Trait27	Naive-mature B	GCST90001408	ebi-a-GC9
Absolute count	B cell	BC_Trait28	Naive-mature B	GCST90001409	ebi-a-GC9
Relative count	B cell	BC_Trait3	IgD- CD38br %f	GCST90001410	ebi-a-GC9
Relative count	B cell	BC_Trait31	IgD+ CD24+ %E	GCST90001411	ebi-a-GC9
Absolute count	B cell	BC_Trait32	IgD+ CD24+ AC	GCST90001412	ebi-a-GC9
Relative count	B cell	BC_Trait33	IgD- CD24- %B	GCST90001413	ebi-a-GC9
Absolute count	B cell	BC_Trait34	IgD- CD24- AC	GCST90001414	ebi-a-GC9
Relative count	B cell	BC_Trait35	IgD+ CD24- %B	GCST90001415	ebi-a-GC9
Absolute count	B cell	BC_Trait36	IgD+ CD24- AC	GCST90001416	ebi-a-GC9
Relative count	B cell	BC_Trait37	CD24+ CD27+	GCST90001417	ebi-a-GC9
Absolute count	B cell	BC_Trait38	CD24+ CD27+	GCST90001418	ebi-a-GC9
Relative count	B cell	BC_Trait39	CD20- %B cell	GCST90001419	ebi-a-GC9
Absolute count	B cell	BC_Trait4	IgD- CD38br AC	GCST90001420	ebi-a-GC9
Absolute count	B cell	BC_Trait40	CD20- AC	GCST90001421	ebi-a-GC9
Relative count	B cell	BC_Trait43	CD20- CD38- %	GCST90001422	ebi-a-GC9
Absolute count	B cell	BC_Trait44	CD20- CD38- A	GCST90001423	ebi-a-GC9
Relative count	B cell	BC_Trait46	IgD+ %Lympho	GCST90001424	ebi-a-GC9
Relative count	B cell	BC_Trait47	IgD- CD38br %l	GCST90001425	ebi-a-GC9
Relative count	B cell	BC_Trait48	IgD- CD38dim %	GCST90001426	ebi-a-GC9
Relative count	B cell	BC_Trait49	IgD- CD38- %ly	GCST90001427	ebi-a-GC9
Relative count	B cell	BC_Trait5	IgD- CD38dim %	GCST90001428	ebi-a-GC9
Relative count	B cell	BC_Trait50	IgD+ CD38br %	GCST90001429	ebi-a-GC9
Relative count	B cell	BC_Trait51	IgD+ CD38dim	GCST90001430	ebi-a-GC9
Relative count	B cell	BC_Trait52	IgD+ CD38- %ly	GCST90001431	ebi-a-GC9
Relative count	B cell	BC_Trait54	Unsw Mem %lyl	GCST90001432	ebi-a-GC9
Relative count	B cell	BC_Trait55	IgD- CD27- %ly	GCST90001433	ebi-a-GC9
Relative count	B cell	BC_Trait56	Sw mem %lymp	GCST90001434	ebi-a-GC9

Relative count	B cell	BC_Trait57	PB/PC %lymphc	GCST90001435	ebi-a-GC
Relative count	B cell	BC_Trait58	Memory B cell	GCST90001436	ebi-a-GC
Relative count	B cell	BC_Trait59	Naive-mature B	GCST90001437	ebi-a-GC
Absolute count	B cell	BC_Trait6	IgD- CD38dim	AGCST90001438	ebi-a-GC
Relative count	B cell	BC_Trait61	IgD+ CD24+ %I	GCST90001439	ebi-a-GC
Relative count	B cell	BC_Trait62	IgD- CD24- %ly	GCST90001440	ebi-a-GC
Relative count	B cell	BC_Trait63	IgD+ CD24- %ly	GCST90001441	ebi-a-GC
Relative count	B cell	BC_Trait64	CD24+ CD27+ %	GCST90001442	ebi-a-GC
Relative count	B cell	BC_Trait65	CD20- %lymphc	GCST90001443	ebi-a-GC
Relative count	B cell	BC_Trait67	CD20- CD38- %	GCST90001444	ebi-a-GC
Relative count	B cell	BC_Trait7	IgD- CD38- %B	GCST90001445	ebi-a-GC
Absolute count	B cell	BC_Trait8	IgD- CD38- AC	GCST90001446	ebi-a-GC
Relative count	B cell	BC_Trait9	IgD+ CD38br %	GCST90001447	ebi-a-GC
Absolute count	cDC	DC_Trait524	CD11c+ monoc	GCST90001448	ebi-a-GC
Relative count	cDC	DC_Trait525	CD11c+ monoc	GCST90001449	ebi-a-GC
Absolute count	cDC	DC_Trait526	CD62L- monoc	GCST90001450	ebi-a-GC
Relative count	cDC	DC_Trait527	CD62L- monoc	GCST90001451	ebi-a-GC
Absolute count	cDC	DC_Trait530	CD11c+ CD62L	GCST90001452	ebi-a-GC
Relative count	cDC	DC_Trait531	CD11c+ CD62L	GCST90001453	ebi-a-GC
Absolute count	cDC	DC_Trait532	CD62L- HLA DFG	GCST90001454	ebi-a-GC
Relative count	cDC	DC_Trait533	CD62L- HLA DFG	GCST90001455	ebi-a-GC
Absolute count	cDC	DC_Trait534	CD11c+ HLA DIG	GCST90001456	ebi-a-GC
Relative count	cDC	DC_Trait535	CD11c+ HLA DIG	GCST90001457	ebi-a-GC
Absolute count	cDC	f_DC_Trait502	Myeloid DC AC	GCST90001458	ebi-a-GC
Relative count	cDC	f_DC_Trait503	Myeloid DC %D	GCST90001459	ebi-a-GC
Absolute count	cDC	f_DC_Trait504	Plasmacytoid D	GCST90001460	ebi-a-GC
Absolute count	cDC	f_DC_Trait505	DC AC	GCST90001461	ebi-a-GC
Absolute count	cDC	f_DC_Trait508	CD62L- DC AC	GCST90001462	ebi-a-GC
Relative count	cDC	f_DC_Trait509	CD62L- DC %D	GCST90001463	ebi-a-GC
Absolute count	cDC	f_DC_Trait512	CD86+ myeloid	GCST90001464	ebi-a-GC
Relative count	cDC	f_DC_Trait513	CD86+ myeloid	GCST90001465	ebi-a-GC
Absolute count	cDC	f_DC_Trait514	CD86+ plasmac	GCST90001466	ebi-a-GC
Relative count	cDC	f_DC_Trait515	CD86+ plasmac	GCST90001467	ebi-a-GC
Absolute count	cDC	f_DC_Trait516	CD62L- myeloid	GCST90001468	ebi-a-GC
Relative count	cDC	f_DC_Trait517	CD62L- myeloi	GCST90001469	ebi-a-GC
Absolute count	cDC	f_DC_Trait518	CD62L- plasma	GCST90001470	ebi-a-GC
Relative count	cDC	f_DC_Trait519	CD62L- plasma	GCST90001471	ebi-a-GC
Absolute count	cDC	f_DC_Trait520	CD62L- CD86+	GCST90001472	ebi-a-GC
Relative count	cDC	f_DC_Trait521	CD62L- CD86+	GCST90001473	ebi-a-GC
Relative count	cDC	f_DC_Trait522	Plasmacytoid	GCST90001474	ebi-a-GC
Relative count	TBNK	f_MONO_Trait	HLA DR++ mon	GCST90001475	ebi-a-GC
Relative count	TBNK	f_MONO_Trait	HLA DR++ mon	GCST90001476	ebi-a-GC
Absolute count	TBNK	f_MONO_Trait	HLA DR++ mon	GCST90001477	ebi-a-GC
Relative count	Treg	f_Treg_Trait50	CD4 Treg %CD	GCST90001478	ebi-a-GC
Relative count	Treg	f_Treg_Trait50	CD4 Treg %T c	GCST90001479	ebi-a-GC

Absolute count	Treg	f_Treg_Trait50 Resting Treg	ACGCST90001480	ebi-a-GC9
Relative count	Treg	f_Treg_Trait50 Resting Treg %	GCST90001481	ebi-a-GC9
Relative count	Treg	f_Treg_Trait50 Resting Treg %	GCST90001482	ebi-a-GC9
Absolute count	Treg	f_Treg_Trait50 CD39+ resting	TGCST90001483	ebi-a-GC9
Relative count	Treg	f_Treg_Trait50 CD39+ resting	TGCST90001484	ebi-a-GC9
Relative count	Treg	f_Treg_Trait50 CD39+ resting	GCST90001485	ebi-a-GC9
Absolute count	Treg	f_Treg_Trait50 Activated Treg	GCST90001486	ebi-a-GC9
Relative count	Treg	f_Treg_Trait51 Activated Treg	GCST90001487	ebi-a-GC9
Relative count	Treg	f_Treg_Trait51 Activated Treg	GCST90001488	ebi-a-GC9
Absolute count	Treg	f_Treg_Trait51 CD39+ activate	GCST90001489	ebi-a-GC9
Relative count	Treg	f_Treg_Trait51 CD39+ activate	GCST90001490	ebi-a-GC9
Relative count	Treg	f_Treg_Trait51 CD39+ activate	GCST90001491	ebi-a-GC9
Absolute count	Treg	f_Treg_Trait51 Secreting Treg	GCST90001492	ebi-a-GC9
Relative count	Treg	f_Treg_Trait51 Secreting Treg	GCST90001493	ebi-a-GC9
Relative count	Treg	f_Treg_Trait51 Secreting Treg	GCST90001494	ebi-a-GC9
Absolute count	Treg	f_Treg_Trait51 CD39+ secretin	GCST90001495	ebi-a-GC9
Relative count	Treg	f_Treg_Trait51 CD39+ secretin	GCST90001496	ebi-a-GC9
Relative count	Treg	f_Treg_Trait52 CD39+ secretin	GCST90001497	ebi-a-GC9
Absolute count	Treg	f_Treg_Trait52 Activated & rest	GCST90001498	ebi-a-GC9
Relative count	Treg	f_Treg_Trait52 Activated & res	GCST90001499	ebi-a-GC9
Relative count	Treg	f_Treg_Trait52 Activated & res	GCST90001500	ebi-a-GC9
Absolute count	Treg	f_Treg_Trait52 Activated & seci	GCST90001501	ebi-a-GC9
Relative count	Treg	f_Treg_Trait52 Activated & sec	GCST90001502	ebi-a-GC9
Relative count	Treg	f_Treg_Trait52 Activated & sec	GCST90001503	ebi-a-GC9
Absolute count	Treg	f_Treg_Trait53 CD25hi AC	GCST90001504	ebi-a-GC9
Relative count	Treg	f_Treg_Trait53 CD25hi %CD4+	GCST90001505	ebi-a-GC9
Relative count	Treg	f_Treg_Trait53 CD25hi %T cell	GCST90001506	ebi-a-GC9
Absolute count	Treg	f_Treg_Trait53 CD25hi CD45R	GCST90001507	ebi-a-GC9
Relative count	Treg	f_Treg_Trait53 CD25hi CD45R	GCST90001508	ebi-a-GC9
Relative count	Treg	f_Treg_Trait53 CD25hi CD45R	GCST90001509	ebi-a-GC9
Absolute count	Treg	f_Treg_Trait53 CD25hi CD45R	GCST90001510	ebi-a-GC9
Relative count	Treg	f_Treg_Trait54 CD25hi CD45R	GCST90001511	ebi-a-GC9
Relative count	Treg	f_Treg_Trait54 CD25hi CD45R	GCST90001512	ebi-a-GC9
Absolute count	Treg	f_Treg_Trait54 CD4 Treg AC	GCST90001513	ebi-a-GC9
Absolute count	Myeloid c	MDSC_Trait1 HSC AC	GCST90001514	ebi-a-GC9
Absolute count	Myeloid c	MDSC_Trait10 Im MDSC AC	GCST90001515	ebi-a-GC9
Relative count	Myeloid c	MDSC_Trait11 Im MDSC %CD	GCST90001516	ebi-a-GC9
Absolute count	Myeloid c	MDSC_Trait12 CD33br HLA DFG	GCST90001517	ebi-a-GC9
Absolute count	Myeloid c	MDSC_Trait13 CD33br HLA DFG	GCST90001518	ebi-a-GC9
Relative count	Myeloid c	MDSC_Trait14 CD33br HLA DFG	GCST90001519	ebi-a-GC9
Absolute count	Myeloid c	MDSC_Trait15 CD33br HLA DFG	GCST90001520	ebi-a-GC9
Relative count	Myeloid c	MDSC_Trait16 CD33br HLA DFG	GCST90001521	ebi-a-GC9
Absolute count	Myeloid c	MDSC_Trait22 CD33- HLA DR-	GCST90001522	ebi-a-GC9
Absolute count	Myeloid c	MDSC_Trait23 CD33- HLA DR-	GCST90001523	ebi-a-GC9
Absolute count	Myeloid c	MDSC_Trait24 Gr MDSC AC	GCST90001524	ebi-a-GC9

Absolute count	Myeloid cMDSC_Trait25 CD33dim HLA [GCST90001525	ebi-a-GC9
Relative count	Myeloid cMDSC_Trait26 CD33dim HLA [GCST90001526	ebi-a-GC9
Absolute count	Myeloid cMDSC_Trait27 CD33dim HLA [GCST90001527	ebi-a-GC9
Relative count	Myeloid cMDSC_Trait28 CD33dim HLA [GCST90001528	ebi-a-GC9
Absolute count	Myeloid cMDSC_Trait3 CD66b++ myelcGCST90001529	ebi-a-GC9
Absolute count	Myeloid cMDSC_Trait4 Mo MDSC AC GCST90001530	ebi-a-GC9
Absolute count	Myeloid cMDSC_Trait5 CD33dim HLA [GCST90001531	ebi-a-GC9
Absolute count	Myeloid cMDSC_Trait8 Basophil AC GCST90001532	ebi-a-GC9
Relative count	Myeloid cMDSC_Trait9 Basophil %CD3 GCST90001533	ebi-a-GC9
Absolute count	MaturatioMT_ry_Trait51 CD45RA- CD4+GCST90001534	ebi-a-GC9
Relative count	MaturatioMT_ry_Trait51 CD45RA- CD4+GCST90001535	ebi-a-GC9
Relative count	MaturatioMT_ry_Trait51 CD45RA- CD4+GCST90001536	ebi-a-GC9
Absolute count	MaturatioMT_Trait503 CM CD4+ AC GCST90001537	ebi-a-GC9
Relative count	MaturatioMT_Trait504 CM CD4+ %CDGCST90001538	ebi-a-GC9
Relative count	MaturatioMT_Trait505 CM CD4+ %T cGCST90001539	ebi-a-GC9
Absolute count	MaturatioMT_Trait506 Naive CD4+ AC GCST90001540	ebi-a-GC9
Relative count	MaturatioMT_Trait507 Naive CD4+ %CGCST90001541	ebi-a-GC9
Absolute count	MaturatioMT_Trait508 EM CD4+ AC GCST90001542	ebi-a-GC9
Relative count	MaturatioMT_Trait509 EM CD4+ %CDGCST90001543	ebi-a-GC9
Relative count	MaturatioMT_Trait510 EM CD4+ %T cGCST90001544	ebi-a-GC9
Absolute count	MaturatioMT_Trait511 TD CD4+ AC GCST90001545	ebi-a-GC9
Relative count	MaturatioMT_Trait512 TD CD4+ %CD ² GCST90001546	ebi-a-GC9
Relative count	MaturatioMT_Trait513 TD CD4+ %T cGCST90001547	ebi-a-GC9
Absolute count	MaturatioMT_Trait522 CM CD8br AC GCST90001548	ebi-a-GC9
Relative count	MaturatioMT_Trait523 CM CD8br %CIGCST90001549	ebi-a-GC9
Relative count	MaturatioMT_Trait524 CM CD8br %T cGCST90001550	ebi-a-GC9
Absolute count	MaturatioMT_Trait525 Naive CD8br AC GCST90001551	ebi-a-GC9
Relative count	MaturatioMT_Trait526 Naive CD8br %GCST90001552	ebi-a-GC9
Relative count	MaturatioMT_Trait527 Naive CD8br %GCST90001553	ebi-a-GC9
Absolute count	MaturatioMT_Trait528 EM CD8br AC GCST90001554	ebi-a-GC9
Relative count	MaturatioMT_Trait529 EM CD8br %CIGCST90001555	ebi-a-GC9
Relative count	MaturatioMT_Trait530 EM CD8br %T cGCST90001556	ebi-a-GC9
Absolute count	MaturatioMT_Trait531 TD CD8br AC GCST90001557	ebi-a-GC9
Relative count	MaturatioMT_Trait532 TD CD8br %CIGCST90001558	ebi-a-GC9
Relative count	MaturatioMT_Trait533 TD CD8br %T cGCST90001559	ebi-a-GC9
Absolute count	MaturatioMT_Trait537 CD45RA+ CD8tGCST90001560	ebi-a-GC9
Relative count	MaturatioMT_Trait538 CD45RA+ CD8tGCST90001561	ebi-a-GC9
Relative count	MaturatioMT_Trait539 CD45RA+ CD8tGCST90001562	ebi-a-GC9
Absolute count	MaturatioMT_Trait542 CM DN (CD4-CIGCST90001563	ebi-a-GC9
Relative count	MaturatioMT_Trait543 CM DN (CD4-CIGCST90001564	ebi-a-GC9
Relative count	MaturatioMT_Trait544 CM DN (CD4-CIGCST90001565	ebi-a-GC9
Absolute count	MaturatioMT_Trait545 Naive DN (CD4-GCST90001566	ebi-a-GC9
Relative count	MaturatioMT_Trait546 Naive DN (CD4 GCST90001567	ebi-a-GC9
Relative count	MaturatioMT_Trait547 Naive DN (CD4-GCST90001568	ebi-a-GC9
Absolute count	MaturatioMT_Trait548 EM DN (CD4-CIGCST90001569	ebi-a-GC9

Relative count	Maturatio	MT_Trait549	EM DN (CD4-CIGCST90001570	ebi-a-GC
Relative count	Maturatio	MT_Trait550	EM DN (CD4-CIGCST90001571	ebi-a-GC
Absolute count	Maturatio	MT_Trait551	TD DN (CD4-CIGCST90001572	ebi-a-GC
Relative count	Maturatio	MT_Trait552	TD DN (CD4-CIGCST90001573	ebi-a-GC
Relative count	Maturatio	MT_Trait553	TD DN (CD4-CIGCST90001574	ebi-a-GC
Relative count	Maturatio	MT_Trait560	Naive CD4+ %GCST90001575	ebi-a-GC
Relative count	B cell	N_BC_Trait3	Transitional %B GCST90001576	ebi-a-GC
Absolute count	B cell	N_BC_Trait4	Transitional AC GCST90001577	ebi-a-GC
Relative count	B cell	N_BC_Trait6	Transitional %I GCST90001578	ebi-a-GC
Absolute count	Monocyte	N_MONO_Trai	CD14- CD16+ nGCST90001579	ebi-a-GC
Absolute count	Monocyte	N_MONO_Trai	CD14+ CD16+ rGCST90001580	ebi-a-GC
Absolute count	Monocyte	N_MONO_Trai	CD14- CD16- A GCST90001581	ebi-a-GC
Absolute count	Monocyte	N_MONO_Trai	CD14+ CD16- nGCST90001582	ebi-a-GC
Absolute count	Monocyte	N_MONO_Trai	Monocyte AC GCST90001583	ebi-a-GC
Relative count	Monocyte	N_MONO_Trai	CD14- CD16+ nGCST90001584	ebi-a-GC
Relative count	Monocyte	N_MONO_Trai	CD14+ CD16+ rGCST90001585	ebi-a-GC
Relative count	Monocyte	N_MONO_Trai	CD14+ CD16- nGCST90001586	ebi-a-GC
Relative count	Monocyte	N_MONO_Trai	CD16+ monocyGCST90001587	ebi-a-GC
Relative count	TBNK	RATIO_CD3_ET/B	GCST90001588	ebi-a-GC
Relative count	TBNK	RATIO_CD4_CCD4/CD8br	GCST90001589	ebi-a-GC
Absolute count	TBNK	TB_ry_Trait51	CD4+ AC GCST90001590	ebi-a-GC
Relative count	TBNK	TB_ry_Trait51	CD4+ %T cell GCST90001591	ebi-a-GC
Absolute count	TBNK	TB_ry_Trait51	CD8br AC GCST90001592	ebi-a-GC
Relative count	TBNK	TB_ry_Trait51	CD8br %T cell GCST90001593	ebi-a-GC
Absolute count	TBNK	TB_ry_Trait51	DP (CD4+CD8+GCST90001594	ebi-a-GC
Relative count	TBNK	TB_ry_Trait51	DP (CD4+CD8+GCST90001595	ebi-a-GC
Absolute count	TBNK	TB_ry_Trait52	CD8dim AC GCST90001596	ebi-a-GC
Relative count	TBNK	TB_ry_Trait52	CD8dim %T cellGCST90001597	ebi-a-GC
Absolute count	TBNK	TB_ry_Trait52	DN (CD4-CD8-)GCST90001598	ebi-a-GC
Relative count	TBNK	TB_ry_Trait52	DN (CD4-CD8-)GCST90001599	ebi-a-GC
Absolute count	TBNK	TB_Trait501	Leukocyte AC GCST90001600	ebi-a-GC
Absolute count	TBNK	TB_Trait507	Lymphocyte AC GCST90001601	ebi-a-GC
Relative count	TBNK	TB_Trait508	Lymphocyte %leGCST90001602	ebi-a-GC
Absolute count	TBNK	TB_Trait509	T cell AC GCST90001603	ebi-a-GC
Relative count	TBNK	TB_Trait510	T cell %lymphocGCST90001604	ebi-a-GC
Relative count	TBNK	TB_Trait511	T cell %leukocyGCST90001605	ebi-a-GC
Relative count	TBNK	TB_Trait514	CD4+ %leukocyGCST90001606	ebi-a-GC
Relative count	TBNK	TB_Trait517	CD8br %leukocGCST90001607	ebi-a-GC
Relative count	TBNK	TB_Trait520	DP (CD4+CD8+GCST90001608	ebi-a-GC
Absolute count	TBNK	TB_Trait521	CD4+ CD8dim GCST90001609	ebi-a-GC
Relative count	TBNK	TB_Trait522	CD4+ CD8dim %GCST90001610	ebi-a-GC
Relative count	TBNK	TB_Trait523	CD4+ CD8dim %GCST90001611	ebi-a-GC
Relative count	TBNK	TB_Trait526	CD8dim %leukoGCST90001612	ebi-a-GC
Relative count	TBNK	TB_Trait529	DN (CD4-CD8-)GCST90001613	ebi-a-GC
Relative count	TBNK	TB_Trait532	CD8br and CD8GCST90001614	ebi-a-GC

Absolute count	TBNK	TB_Trait533	TCRgd AC	GCST90001615	ebi-a-GC9
Relative count	TBNK	TB_Trait534	TCRgd %T cell	GCST90001616	ebi-a-GC9
Relative count	TBNK	TB_Trait535	TCRgd %lymph	GCST90001617	ebi-a-GC9
Absolute count	TBNK	TB_Trait536	HLA DR+ T cell	GCST90001618	ebi-a-GC9
Relative count	TBNK	TB_Trait537	HLA DR+ T cell	GCST90001619	ebi-a-GC9
Relative count	TBNK	TB_Trait538	HLA DR+ T cell	GCST90001620	ebi-a-GC9
Absolute count	TBNK	TB_Trait539	NKT AC	GCST90001621	ebi-a-GC9
Relative count	TBNK	TB_Trait540	NKT %T cell	GCST90001622	ebi-a-GC9
Relative count	TBNK	TB_Trait541	NKT %lymphoc	GCST90001623	ebi-a-GC9
Absolute count	TBNK	TB_Trait542	HLA DR+ CD4+	GCST90001624	ebi-a-GC9
Relative count	TBNK	TB_Trait543	HLA DR+ CD4+	GCST90001625	ebi-a-GC9
Relative count	TBNK	TB_Trait544	HLA DR+ CD4+	GCST90001626	ebi-a-GC9
Absolute count	TBNK	TB_Trait545	HLA DR+ CD8b	GCST90001627	ebi-a-GC9
Relative count	TBNK	TB_Trait546	HLA DR+ CD8b	GCST90001628	ebi-a-GC9
Relative count	TBNK	TB_Trait547	HLA DR+ CD8b	GCST90001629	ebi-a-GC9
Absolute count	TBNK	TB_Trait548	CD8br NKT AC	GCST90001630	ebi-a-GC9
Relative count	TBNK	TB_Trait549	CD8br NKT %T	GCST90001631	ebi-a-GC9
Relative count	TBNK	TB_Trait550	CD8br NKT %ly	GCST90001632	ebi-a-GC9
Absolute count	TBNK	TB_Trait551	CD8dim NKT A	GCST90001633	ebi-a-GC9
Relative count	TBNK	TB_Trait552	CD8dim NKT %	GCST90001634	ebi-a-GC9
Relative count	TBNK	TB_Trait553	CD8dim NKT %	GCST90001635	ebi-a-GC9
Absolute count	TBNK	TB_Trait554	DN (CD4-CD8-)	GCST90001636	ebi-a-GC9
Relative count	TBNK	TB_Trait555	DN (CD4-CD8-)	GCST90001637	ebi-a-GC9
Relative count	TBNK	TB_Trait556	DN (CD4-CD8-)	GCST90001638	ebi-a-GC9
Absolute count	TBNK	TB_Trait560	CD3- lymphocyt	GCST90001639	ebi-a-GC9
Relative count	TBNK	TB_Trait561	CD3- lymphocyt	GCST90001640	ebi-a-GC9
Relative count	TBNK	TB_Trait562	CD3- lymphocyt	GCST90001641	ebi-a-GC9
Absolute count	TBNK	TB_Trait563	B cell AC	GCST90001642	ebi-a-GC9
Relative count	TBNK	TB_Trait564	B cell % CD3- I	GCST90001643	ebi-a-GC9
Relative count	TBNK	TB_Trait565	B cell %lymphoc	GCST90001644	ebi-a-GC9
Absolute count	TBNK	TB_Trait566	NK AC	GCST90001645	ebi-a-GC9
Relative count	TBNK	TB_Trait567	NK %CD3- lymf	GCST90001646	ebi-a-GC9
Relative count	TBNK	TB_Trait568	NK %lymphocyt	GCST90001647	ebi-a-GC9
Absolute count	TBNK	TB_Trait569	HLA DR+ NK A	GCST90001648	ebi-a-GC9
Relative count	TBNK	TB_Trait570	HLA DR+ NK %	GCST90001649	ebi-a-GC9
Relative count	TBNK	TB_Trait571	HLA DR+ NK %	GCST90001650	ebi-a-GC9
Absolute count	TBNK	TB_Trait575	Granulocyte AC	GCST90001651	ebi-a-GC9
Relative count	TBNK	TB_Trait576	Granulocyte %le	GCST90001652	ebi-a-GC9
Relative count	Treg	Treg_Trait505	CD28- DN (CD4	GCST90001653	ebi-a-GC9
Absolute count	Treg	Treg_Trait506	CD28- DN (CD4	GCST90001654	ebi-a-GC9
Relative count	Treg	Treg_Trait507	CD28+ DN (CD	GCST90001655	ebi-a-GC9
Relative count	Treg	Treg_Trait508	CD28+ DN (CD	GCST90001656	ebi-a-GC9
Absolute count	Treg	Treg_Trait509	CD28+ DN (CD	GCST90001657	ebi-a-GC9
Relative count	Treg	Treg_Trait512	CD39+ CD4+ %	GCST90001658	ebi-a-GC9
Relative count	Treg	Treg_Trait513	CD39+ CD4+ %	GCST90001659	ebi-a-GC9

Absolute count	Treg	Treg_Trait514	CD39+ CD4+ A	GCST90001660	ebi-a-GC9
Relative count	Treg	Treg_Trait574	CD28- CD8dim	GCST90001661	ebi-a-GC9
Relative count	Treg	Treg_Trait575	CD28- CD8dim	GCST90001662	ebi-a-GC9
Absolute count	Treg	Treg_Trait576	CD28- CD8dim	GCST90001663	ebi-a-GC9
Relative count	Treg	Treg_Trait577	CD28+ CD45R ^A	GCST90001664	ebi-a-GC9
Relative count	Treg	Treg_Trait578	CD28+ CD45R ^A	GCST90001665	ebi-a-GC9
Absolute count	Treg	Treg_Trait579	CD28+ CD45R ^A	GCST90001666	ebi-a-GC9
Relative count	Treg	Treg_Trait580	CD28+ CD45R ^A	GCST90001667	ebi-a-GC9
Relative count	Treg	Treg_Trait581	CD28+ CD45R ^A	GCST90001668	ebi-a-GC9
Absolute count	Treg	Treg_Trait582	CD28+ CD45R ^A	GCST90001669	ebi-a-GC9
Relative count	Treg	Treg_Trait585	CD39+ CD8br %	GCST90001670	ebi-a-GC9
Relative count	Treg	Treg_Trait586	CD39+ CD8br %	GCST90001671	ebi-a-GC9
Absolute count	Treg	Treg_Trait587	CD39+ CD8br A	GCST90001672	ebi-a-GC9
Relative count	Treg	Treg_Trait588	CD28- CD127- (	GCST90001673	ebi-a-GC9
Relative count	Treg	Treg_Trait589	CD28- CD127- (	GCST90001674	ebi-a-GC9
Absolute count	Treg	Treg_Trait590	CD28- CD127- (	GCST90001675	ebi-a-GC9
Relative count	Treg	Treg_Trait591	CD28- CD25++	GCST90001676	ebi-a-GC9
Relative count	Treg	Treg_Trait592	CD28- CD25++	GCST90001677	ebi-a-GC9
Absolute count	Treg	Treg_Trait593	CD28- CD25++	GCST90001678	ebi-a-GC9
Relative count	Treg	Treg_Trait594	CD25++ CD8br	GCST90001679	ebi-a-GC9
Relative count	Treg	Treg_Trait595	CD25++ CD8br	GCST90001680	ebi-a-GC9
Absolute count	Treg	Treg_Trait596	CD25++ CD8br	GCST90001681	ebi-a-GC9
Relative count	Treg	Treg_Trait597	CD127- CD8br (	GCST90001682	ebi-a-GC9
Relative count	Treg	Treg_Trait598	CD127- CD8br (	GCST90001683	ebi-a-GC9
Absolute count	Treg	Treg_Trait599	CD127- CD8br (	GCST90001684	ebi-a-GC9
Relative count	Treg	Treg_Trait600	CD28- CD8br %	GCST90001685	ebi-a-GC9
Relative count	Treg	Treg_Trait601	CD28- CD8br %	GCST90001686	ebi-a-GC9
Absolute count	Treg	Treg_Trait602	CD28- CD8br A	GCST90001687	ebi-a-GC9
Relative count	Treg	Treg_Trait603	CD28+ CD45R ^A	GCST90001688	ebi-a-GC9
Relative count	Treg	Treg_Trait604	CD28+ CD45R ^A	GCST90001689	ebi-a-GC9
Absolute count	Treg	Treg_Trait605	CD28+ CD45R ^A	GCST90001690	ebi-a-GC9
Relative count	Treg	Treg_Trait606	CD28+ CD45R ^A	GCST90001691	ebi-a-GC9
Relative count	Treg	Treg_Trait607	CD28+ CD45R ^A	GCST90001692	ebi-a-GC9
Absolute count	Treg	Treg_Trait608	CD28+ CD45R ^A	GCST90001693	ebi-a-GC9
Relative count	Treg	Treg_Trait611	CD28- DN (CD4	GCST90001694	ebi-a-GC9
Absolute count	Treg	Treg_Trait700	CD45RA- CD28	GCST90001695	ebi-a-GC9
Relative count	Treg	Treg_Trait701	CD45RA- CD28	GCST90001696	ebi-a-GC9
Relative count	Treg	Treg_Trait702	CD45RA- CD28	GCST90001697	ebi-a-GC9
Absolute count	Treg	Treg_Trait706	CD45RA+ CD28	GCST90001698	ebi-a-GC9
Relative count	Treg	Treg_Trait707	CD45RA+ CD28	GCST90001699	ebi-a-GC9
Relative count	Treg	Treg_Trait708	CD45RA+ CD28	GCST90001700	ebi-a-GC9
MFI	B cell	Bcells.trait111	BAFF-R on CD2	GCST90001701	ebi-a-GC9
MFI	B cell	Bcells.trait112	BAFF-R on CD2	GCST90001702	ebi-a-GC9
MFI	B cell	Bcells.trait137	BAFF-R on IgD	GCST90001703	ebi-a-GC9
MFI	B cell	Bcells.trait138	BAFF-R on IgD	GCST90001704	ebi-a-GC9

MFI	B cell	Bcells.trait139	BAFF-R on IgD-GCST90001705	ebi-a-GC9
MFI	B cell	Bcells.trait140	BAFF-R on IgD-GCST90001706	ebi-a-GC9
MFI	B cell	Bcells.trait141	BAFF-R on IgD GCST90001707	ebi-a-GC9
MFI	B cell	Bcells.trait142	BAFF-R on IgD-GCST90001708	ebi-a-GC9
MFI	B cell	Bcells.trait143	BAFF-R on IgD GCST90001709	ebi-a-GC9
MFI	B cell	Bcells.trait147	BAFF-R on IgD-GCST90001710	ebi-a-GC9
MFI	B cell	Bcells.trait148	BAFF-R on IgD-GCST90001711	ebi-a-GC9
MFI	B cell	Bcells.trait149	BAFF-R on IgD-GCST90001712	ebi-a-GC9
MFI	B cell	Bcells.trait150	BAFF-R on IgD-GCST90001713	ebi-a-GC9
MFI	B cell	Bcells.trait151	BAFF-R on IgD-GCST90001714	ebi-a-GC9
MFI	B cell	Bcells.trait154	BAFF-R on merGCST90001715	ebi-a-GC9
MFI	B cell	Bcells.trait156	BAFF-R on naivGCST90001716	ebi-a-GC9
MFI	B cell	Bcells.trait157	BAFF-R on uns GCST90001717	ebi-a-GC9
MFI	B cell	Bcells.trait159	BAFF-R on sw GCST90001718	ebi-a-GC9
MFI	B cell	Bcells.trait160	BAFF-R on IgD-GCST90001719	ebi-a-GC9
MFI	B cell	Bcells.trait161	BAFF-R on tranGCST90001720	ebi-a-GC9
MFI	B cell	Bcells.trait255	CD19 on CD20-GCST90001721	ebi-a-GC9
MFI	B cell	Bcells.trait282	CD19 on CD20-GCST90001722	ebi-a-GC9
MFI	B cell	Bcells.trait283	CD19 on CD24-GCST90001723	ebi-a-GC9
MFI	B cell	Bcells.trait308	CD19 on IgD+ GCST90001724	ebi-a-GC9
MFI	B cell	Bcells.trait309	CD19 on IgD+ GCST90001725	ebi-a-GC9
MFI	B cell	Bcells.trait310	CD19 on IgD+ GCST90001726	ebi-a-GC9
MFI	B cell	Bcells.trait311	CD19 on IgD+ GCST90001727	ebi-a-GC9
MFI	B cell	Bcells.trait312	CD19 on IgD+ GCST90001728	ebi-a-GC9
MFI	B cell	Bcells.trait313	CD19 on IgD+ GCST90001729	ebi-a-GC9
MFI	B cell	Bcells.trait314	CD19 on IgD+ GCST90001730	ebi-a-GC9
MFI	B cell	Bcells.trait318	CD19 on IgD- CGCST90001731	ebi-a-GC9
MFI	B cell	Bcells.trait319	CD19 on IgD- CGCST90001732	ebi-a-GC9
MFI	B cell	Bcells.trait320	CD19 on IgD- CGCST90001733	ebi-a-GC9
MFI	B cell	Bcells.trait321	CD19 on IgD- CGCST90001734	ebi-a-GC9
MFI	B cell	Bcells.trait322	CD19 on IgD- CGCST90001735	ebi-a-GC9
MFI	B cell	Bcells.trait325	CD19 on memoGCST90001736	ebi-a-GC9
MFI	B cell	Bcells.trait327	CD19 on naive-GCST90001737	ebi-a-GC9
MFI	B cell	Bcells.trait328	CD19 on unsw GCST90001738	ebi-a-GC9
MFI	B cell	Bcells.trait329	CD19 on PB/PCGCST90001739	ebi-a-GC9
MFI	B cell	Bcells.trait331	CD19 on sw meGCST90001740	ebi-a-GC9
MFI	B cell	Bcells.trait332	CD19 on IgD+ GCST90001741	ebi-a-GC9
MFI	B cell	Bcells.trait333	CD19 on transitiGCST90001742	ebi-a-GC9
MFI	B cell	Bcells.trait335	CD20 on B cell GCST90001743	ebi-a-GC9
MFI	B cell	Bcells.trait354	CD20 on CD20-GCST90001744	ebi-a-GC9
MFI	B cell	Bcells.trait355	CD20 on CD24-GCST90001745	ebi-a-GC9
MFI	B cell	Bcells.trait378	CD20 on IgD+ GCST90001746	ebi-a-GC9
MFI	B cell	Bcells.trait379	CD20 on IgD+ GCST90001747	ebi-a-GC9
MFI	B cell	Bcells.trait380	CD20 on IgD+ GCST90001748	ebi-a-GC9
MFI	B cell	Bcells.trait381	CD20 on IgD+ GCST90001749	ebi-a-GC9

MFI	B cell	Bcells.trait382	CD20 on IgD+	GCST90001750	ebi-a-GC
MFI	B cell	Bcells.trait383	CD20 on IgD+	GCST90001751	ebi-a-GC
MFI	B cell	Bcells.trait384	CD20 on IgD+	GCST90001752	ebi-a-GC
MFI	B cell	Bcells.trait388	CD20 on IgD-	CGCST90001753	ebi-a-GC
MFI	B cell	Bcells.trait389	CD20 on IgD-	CGCST90001754	ebi-a-GC
MFI	B cell	Bcells.trait390	CD20 on IgD-	CGCST90001755	ebi-a-GC
MFI	B cell	Bcells.trait391	CD20 on IgD-	CGCST90001756	ebi-a-GC
MFI	B cell	Bcells.trait392	CD20 on IgD-	CGCST90001757	ebi-a-GC
MFI	B cell	Bcells.trait395	CD20 on memo	GCST90001758	ebi-a-GC
MFI	B cell	Bcells.trait397	CD20 on naive-	GCST90001759	ebi-a-GC
MFI	B cell	Bcells.trait398	CD20 on unsw	GCST90001760	ebi-a-GC
MFI	B cell	Bcells.trait399	CD20 on sw me	GCST90001761	ebi-a-GC
MFI	B cell	Bcells.trait400	CD20 on IgD+	GCST90001762	ebi-a-GC
MFI	B cell	Bcells.trait401	CD20 on transiti	GCST90001763	ebi-a-GC
MFI	B cell	Bcells.trait418	CD24 on CD24-	GCST90001764	ebi-a-GC
MFI	B cell	Bcells.trait438	CD24 on IgD+	GCST90001765	ebi-a-GC
MFI	B cell	Bcells.trait439	CD24 on IgD+	GCST90001766	ebi-a-GC
MFI	B cell	Bcells.trait441	CD24 on IgD+	GCST90001767	ebi-a-GC
MFI	B cell	Bcells.trait442	CD24 on IgD+	GCST90001768	ebi-a-GC
MFI	B cell	Bcells.trait445	CD24 on IgD-	CGCST90001769	ebi-a-GC
MFI	B cell	Bcells.trait446	CD24 on IgD-	CGCST90001770	ebi-a-GC
MFI	B cell	Bcells.trait448	CD24 on memo	GCST90001771	ebi-a-GC
MFI	B cell	Bcells.trait449	CD24 on unsw	GCST90001772	ebi-a-GC
MFI	B cell	Bcells.trait450	CD24 on sw me	GCST90001773	ebi-a-GC
MFI	B cell	Bcells.trait451	CD24 on transiti	GCST90001774	ebi-a-GC
MFI	B cell	Bcells.trait453	CD25 on B cell	GCST90001775	ebi-a-GC
MFI	B cell	Bcells.trait470	CD25 on CD20-	GCST90001776	ebi-a-GC
MFI	B cell	Bcells.trait471	CD25 on CD24+	GCST90001777	ebi-a-GC
MFI	B cell	Bcells.trait490	CD25 on IgD+	GCST90001778	ebi-a-GC
MFI	B cell	Bcells.trait491	CD25 on IgD+	GCST90001779	ebi-a-GC
MFI	B cell	Bcells.trait492	CD25 on IgD+	GCST90001780	ebi-a-GC
MFI	B cell	Bcells.trait493	CD25 on IgD+	GCST90001781	ebi-a-GC
MFI	B cell	Bcells.trait494	CD25 on IgD+	GCST90001782	ebi-a-GC
MFI	B cell	Bcells.trait495	CD25 on IgD+	GCST90001783	ebi-a-GC
MFI	B cell	Bcells.trait496	CD25 on IgD+	GCST90001784	ebi-a-GC
MFI	B cell	Bcells.trait500	CD25 on IgD-	CGCST90001785	ebi-a-GC
MFI	B cell	Bcells.trait501	CD25 on IgD-	CGCST90001786	ebi-a-GC
MFI	B cell	Bcells.trait502	CD25 on IgD-	CGCST90001787	ebi-a-GC
MFI	B cell	Bcells.trait503	CD25 on IgD-	CGCST90001788	ebi-a-GC
MFI	B cell	Bcells.trait504	CD25 on IgD-	CGCST90001789	ebi-a-GC
MFI	B cell	Bcells.trait506	CD25 on memo	GCST90001790	ebi-a-GC
MFI	B cell	Bcells.trait508	CD25 on naive-	GCST90001791	ebi-a-GC
MFI	B cell	Bcells.trait509	CD25 on unsw	GCST90001792	ebi-a-GC
MFI	B cell	Bcells.trait510	CD25 on sw me	GCST90001793	ebi-a-GC
MFI	B cell	Bcells.trait511	CD25 on IgD+	GCST90001794	ebi-a-GC

MFI	B cell	Bcells.trait512	CD25 on transiti	GCST90001795	ebi-a-GC
MFI	B cell	Bcells.trait514	CD27 on CD20-	GCST90001796	ebi-a-GC
MFI	B cell	Bcells.trait536	CD27 on CD20-	GCST90001797	ebi-a-GC
MFI	B cell	Bcells.trait537	CD27 on CD24+	GCST90001798	ebi-a-GC
MFI	B cell	Bcells.trait539	CD27 on T cell	GCST90001799	ebi-a-GC
MFI	B cell	Bcells.trait561	CD27 on IgD+	GCST90001800	ebi-a-GC
MFI	B cell	Bcells.trait563	CD27 on IgD+	GCST90001801	ebi-a-GC
MFI	B cell	Bcells.trait565	CD27 on IgD-	CGCST90001802	ebi-a-GC
MFI	B cell	Bcells.trait566	CD27 on IgD-	CGCST90001803	ebi-a-GC
MFI	B cell	Bcells.trait567	CD27 on IgD-	CGCST90001804	ebi-a-GC
MFI	B cell	Bcells.trait570	CD27 on memo	GCST90001805	ebi-a-GC
MFI	B cell	Bcells.trait571	CD27 on unsw	GCST90001806	ebi-a-GC
MFI	B cell	Bcells.trait572	CD27 on PB/PC	GCST90001807	ebi-a-GC
MFI	B cell	Bcells.trait574	CD27 on sw me	GCST90001808	ebi-a-GC
MFI	B cell	Bcells.trait597	CD38 on CD20-	GCST90001809	ebi-a-GC
MFI	B cell	Bcells.trait619	CD38 on CD3-	GCST90001810	ebi-a-GC
MFI	B cell	Bcells.trait637	CD38 on IgD+	CGCST90001811	ebi-a-GC
MFI	B cell	Bcells.trait640	CD38 on IgD+	CGCST90001812	ebi-a-GC
MFI	B cell	Bcells.trait641	CD38 on IgD+	GCST90001813	ebi-a-GC
MFI	B cell	Bcells.trait643	CD38 on IgD-	CGCST90001814	ebi-a-GC
MFI	B cell	Bcells.trait644	CD38 on IgD-	CGCST90001815	ebi-a-GC
MFI	B cell	Bcells.trait646	CD38 on naive-	GCST90001816	ebi-a-GC
MFI	B cell	Bcells.trait647	CD38 on PB/PC	GCST90001817	ebi-a-GC
MFI	B cell	Bcells.trait649	CD38 on IgD+	GCST90001818	ebi-a-GC
MFI	B cell	Bcells.trait650	CD38 on transiti	GCST90001819	ebi-a-GC
MFI	B cell	Bcells.trait775	IgD on IgD+	CDGCST90001820	ebi-a-GC
MFI	B cell	Bcells.trait776	IgD on IgD+	CDGCST90001821	ebi-a-GC
MFI	B cell	Bcells.trait777	IgD on IgD+	CDGCST90001822	ebi-a-GC
MFI	B cell	Bcells.trait779	IgD on IgD+	CDGCST90001823	ebi-a-GC
MFI	B cell	Bcells.trait780	IgD on IgD+	CDGCST90001824	ebi-a-GC
MFI	B cell	Bcells.trait781	IgD on IgD+	CDGCST90001825	ebi-a-GC
MFI	B cell	Bcells.trait785	IgD on unsw m	GCST90001826	ebi-a-GC
MFI	B cell	Bcells.trait786	IgD on IgD+	GCST90001827	ebi-a-GC
MFI	B cell	Bcells.trait787	IgD on transitor	GCST90001828	ebi-a-GC
MFI	B cell	Bcells.trait84	BAFF-R on B ce	GCST90001829	ebi-a-GC
MFI	B cell	Bcells.trait85	BAFF-R on CD2	GCST90001830	ebi-a-GC
MFI	cDC	Blue.530.30.c	ECD62L on CD62	GCST90001831	ebi-a-GC
MFI	cDC	Blue.530.30.c	ECD62L on CD62	GCST90001832	ebi-a-GC
MFI	cDC	Blue.530.30.c	ECD62L on CD62	GCST90001833	ebi-a-GC
MFI	cDC	Blue.530.30.c	ECD62L on monc	GCST90001834	ebi-a-GC
MFI	cDC	Blue.530.30.c	ECD62L on grant	GCST90001835	ebi-a-GC
MFI	Myeloid c	Blue.530.30.MI	CD66b on CD66	GCST90001836	ebi-a-GC
MFI	Myeloid c	Blue.530.30.MI	CD66b on Gr M	GCST90001837	ebi-a-GC
MFI	Maturatio	Blue.530.30.M	CD3 on naive C	GCST90001838	ebi-a-GC
MFI	Maturatio	Blue.530.30.M	CD3 on EM CD	GCST90001839	ebi-a-GC

MFI	Maturatio	Blue.530.30.M ⁺ CD3 on TD CD	GCST90001840	ebi-a-GC
MFI	Maturatio	Blue.530.30.M ⁺ CD3 on CM CD	GCST90001841	ebi-a-GC
MFI	Maturatio	Blue.530.30.M ⁺ CD3 on Naive	GCST90001842	ebi-a-GC
MFI	Maturatio	Blue.530.30.M ⁺ CD3 on EM CD	GCST90001843	ebi-a-GC
MFI	Maturatio	Blue.530.30.M ⁺ CD3 on TD CD4	GCST90001844	ebi-a-GC
MFI	Maturatio	Blue.530.30.M ⁺ CD3 on CD45R	GCST90001845	ebi-a-GC
MFI	Maturatio	Blue.530.30.M ⁺ CD3 on CM CD	GCST90001846	ebi-a-GC
MFI	TBNK	Blue.530.30.TE	CD3 on HLA DFGCST90001847	ebi-a-GC
MFI	TBNK	Blue.530.30.TE	CD3 on NKT GCST90001848	ebi-a-GC
MFI	TBNK	Blue.530.30.TE	CD3 on HLA DFGCST90001849	ebi-a-GC
MFI	TBNK	Blue.530.30.TE	CD3 on HLA DFGCST90001850	ebi-a-GC
MFI	Treg	Blue.530.30.Tr	CD3 on T cell GCST90001851	ebi-a-GC
MFI	Treg	Blue.530.30.Tr	CD3 on CD39+ GCST90001852	ebi-a-GC
MFI	Treg	Blue.530.30.Tr	CD3 on activate GCST90001853	ebi-a-GC
MFI	Treg	Blue.530.30.Tr	CD3 on CD39+ GCST90001854	ebi-a-GC
MFI	Treg	Blue.530.30.Tr	CD3 on secretin GCST90001855	ebi-a-GC
MFI	Treg	Blue.530.30.Tr	CD3 on CD39+ GCST90001856	ebi-a-GC
MFI	Treg	Blue.530.30.Tr	CD3 on activate GCST90001857	ebi-a-GC
MFI	Treg	Blue.530.30.Tr	CD3 on CD45R GCST90001858	ebi-a-GC
MFI	Treg	Blue.530.30.Tr	CD3 on CD8br GCST90001859	ebi-a-GC
MFI	Treg	Blue.530.30.Tr	CD3 on CD39+ GCST90001860	ebi-a-GC
MFI	Treg	Blue.530.30.Tr	CD3 on CD28+ GCST90001861	ebi-a-GC
MFI	Treg	Blue.530.30.Tr	CD3 on CD28+ GCST90001862	ebi-a-GC
MFI	Treg	Blue.530.30.Tr	CD3 on CD28+ GCST90001863	ebi-a-GC
MFI	Treg	Blue.530.30.Tr	CD3 on CD28+ GCST90001864	ebi-a-GC
MFI	Treg	Blue.530.30.Tr	CD3 on CD28- GCST90001865	ebi-a-GC
MFI	Treg	Blue.530.30.Tr	CD3 on CD39+ GCST90001866	ebi-a-GC
MFI	Treg	Blue.530.30.Tr	CD3 on CD4+ GCST90001867	ebi-a-GC
MFI	Treg	Blue.530.30.Tr	CD3 on CD4 Tr GCST90001868	ebi-a-GC
MFI	Treg	Blue.530.30.Tr	CD3 on resting GCST90001869	ebi-a-GC
MFI	Myeloid c	Blue.585.42.MI	CD34 on HSC GCST90001870	ebi-a-GC
MFI	Maturatio	HVEM1000_15HVEM on T cell	GCST90001871	ebi-a-GC
MFI	Maturatio	HVEM1000_15HVEM on naive	GCST90001872	ebi-a-GC
MFI	Maturatio	HVEM1000_15HVEM on EM	CGCST90001873	ebi-a-GC
MFI	Maturatio	HVEM1000_15HVEM on TD	CIGCST90001874	ebi-a-GC
MFI	Maturatio	HVEM1000_15HVEM on CD4+	GCST90001875	ebi-a-GC
MFI	Maturatio	HVEM1000_15HVEM on CM	CGCST90001876	ebi-a-GC
MFI	Maturatio	HVEM1000_15HVEM on naive	GCST90001877	ebi-a-GC
MFI	Maturatio	HVEM1000_15HVEM on EM	CGCST90001878	ebi-a-GC
MFI	Maturatio	HVEM1000_15HVEM on TD	C GCST90001879	ebi-a-GC
MFI	Maturatio	HVEM1000_15HVEM on CD45	GCST90001880	ebi-a-GC
MFI	Maturatio	HVEM1000_15HVEM on CD8b	GCST90001881	ebi-a-GC
MFI	Maturatio	HVEM1000_15HVEM on CM	CGCST90001882	ebi-a-GC
MFI	TBNK	Blue.585.42.TE	CD16-CD56 on GCST90001883	ebi-a-GC
MFI	TBNK	Blue.585.42.TE	CD16-CD56 on GCST90001884	ebi-a-GC

MFI	TBNK	Blue.585.42.TE	CD16-CD56 on GCST90001885	ebi-a-GC
MFI	Treg	Blue.585.42.Tr	CD28 on CD39+GCST90001886	ebi-a-GC
MFI	Treg	Blue.585.42.Tr	CD28 on secretiGCST90001887	ebi-a-GC
MFI	Treg	Blue.585.42.Tr	CD28 on CD39+GCST90001888	ebi-a-GC
MFI	Treg	Blue.585.42.Tr	CD28 on activatGCST90001889	ebi-a-GC
MFI	Treg	Blue.585.42.Tr	CD28 on CD45fGCST90001890	ebi-a-GC
MFI	Treg	Blue.585.42.Tr	CD28 on CD45fGCST90001891	ebi-a-GC
MFI	Treg	Blue.585.42.Tr	CD28 on CD39+GCST90001892	ebi-a-GC
MFI	Treg	Blue.585.42.Tr	CD28 on CD28+GCST90001893	ebi-a-GC
MFI	Treg	Blue.585.42.Tr	CD28 on CD28+GCST90001894	ebi-a-GC
MFI	Treg	Blue.585.42.Tr	CD28 on CD28+GCST90001895	ebi-a-GC
MFI	Treg	Blue.585.42.Tr	CD28 on CD28+GCST90001896	ebi-a-GC
MFI	Treg	Blue.585.42.Tr	CD28 on CD39+GCST90001897	ebi-a-GC
MFI	Treg	Blue.585.42.Tr	CD28 on CD4+ GCST90001898	ebi-a-GC
MFI	Treg	Blue.585.42.Tr	CD28 on CD4 TGCST90001899	ebi-a-GC
MFI	Treg	Blue.585.42.Tr	CD28 on restingGCST90001900	ebi-a-GC
MFI	Treg	Blue.585.42.Tr	CD28 on CD39+GCST90001901	ebi-a-GC
MFI	Treg	Blue.585.42.Tr	CD28 on activatGCST90001902	ebi-a-GC
MFI	cDC	Blue.670.LP.c	CD86 on myeloiGCST90001903	ebi-a-GC
MFI	cDC	Blue.670.LP.c	CD86 on CD62lGCST90001904	ebi-a-GC
MFI	cDC	Blue.670.LP.c	CD86 on monocGCST90001905	ebi-a-GC
MFI	cDC	Blue.670.LP.c	CD86 on granulGCST90001906	ebi-a-GC
MFI	Maturation	Blue.670.LP.M	CCR7 on naive GCST90001907	ebi-a-GC
MFI	Maturation	Blue.670.LP.M	CCR7 on naive GCST90001908	ebi-a-GC
MFI	TBNK	Blue.670.LP.TE	CD45 on CD14+GCST90001909	ebi-a-GC
MFI	TBNK	Blue.670.LP.TE	CD45 on B cell GCST90001910	ebi-a-GC
MFI	TBNK	Blue.670.LP.TE	CD45 on NK GCST90001911	ebi-a-GC
MFI	TBNK	Blue.670.LP.TE	CD45 on HLA DGCST90001912	ebi-a-GC
MFI	TBNK	Blue.670.LP.TE	CD45 on granulGCST90001913	ebi-a-GC
MFI	TBNK	Blue.670.LP.TE	CD45 on lymphGCST90001914	ebi-a-GC
MFI	TBNK	Blue.670.LP.TE	CD45 on T cell GCST90001915	ebi-a-GC
MFI	TBNK	Blue.670.LP.TE	CD45 on CD4+ GCST90001916	ebi-a-GC
MFI	TBNK	Blue.670.LP.TE	CD45 on CD8brGCST90001917	ebi-a-GC
MFI	TBNK	Blue.670.LP.TE	CD45 on HLA DGCST90001918	ebi-a-GC
MFI	TBNK	Blue.670.LP.TE	CD45 on NKT GCST90001919	ebi-a-GC
MFI	TBNK	Blue.670.LP.TE	CD45 on HLA DGCST90001920	ebi-a-GC
MFI	TBNK	Blue.670.LP.TE	CD45 on HLA DGCST90001921	ebi-a-GC
MFI	Treg	Blue.670.LP.Tr	CD127 on T cellGCST90001922	ebi-a-GC
MFI	Treg	Blue.670.LP.Tr	CD127 on CD4fGCST90001923	ebi-a-GC
MFI	Treg	Blue.670.LP.Tr	CD127 on CD2fGCST90001924	ebi-a-GC
MFI	Treg	Blue.670.LP.Tr	CD127 on CD2fGCST90001925	ebi-a-GC
MFI	Treg	Blue.670.LP.Tr	CD127 on grantGCST90001926	ebi-a-GC
MFI	Treg	Blue.670.LP.Tr	CD127 on CD8tGCST90001927	ebi-a-GC
MFI	Treg	Blue.670.LP.Tr	CD127 on CD2fGCST90001928	ebi-a-GC
MFI	Treg	Blue.670.LP.Tr	CD127 on CD2fGCST90001929	ebi-a-GC

MFI	Treg	Blue.670.LP.TrCD127 on CD25	GCST90001930	ebi-a-GC9	
MFI	Treg	Blue.670.LP.TrCD127 on CD4+	GCST90001931	ebi-a-GC9	
MFI	Treg	Blue.670.LP.TrCD127 on CD45	GCST90001932	ebi-a-GC9	
MFI	Treg	Blue.780.60.C[CD25 on CD45	GCST90001933	ebi-a-GC9	
MFI	Treg	Blue.780.60.C[CD25 on CD45	GCST90001934	ebi-a-GC9	
MFI	Treg	Blue.780.60.C[CD25 on CD39+	GCST90001935	ebi-a-GC9	
MFI	Treg	Blue.780.60.C[CD25 on CD4	GCST90001936	ebi-a-GC9	
MFI	Treg	Blue.780.60.C[CD25 on resting	GCST90001937	ebi-a-GC9	
MFI	Treg	Blue.780.60.C[CD25 on CD39+	GCST90001938	ebi-a-GC9	
MFI	Treg	Blue.780.60.C[CD25 on activat	GCST90001939	ebi-a-GC9	
MFI	Treg	Blue.780.60.C[CD25 on CD39+	GCST90001940	ebi-a-GC9	
MFI	Treg	Blue.780.60.C[CD25 on secreti	GCST90001941	ebi-a-GC9	
MFI	Treg	Blue.780.60.C[CD25 on CD39+	GCST90001942	ebi-a-GC9	
MFI	Treg	Blue.780.60.C[CD25 on activat	GCST90001943	ebi-a-GC9	
MFI	cDC	Blue.780.60.c[CD123 on plas	GCST90001944	ebi-a-GC9	
MFI	cDC	Blue.780.60.c[CD123 on CD62	GCST90001945	ebi-a-GC9	
MFI	Myeloid c	Blue.780.60.MI[CD33 on CD14+	GCST90001946	ebi-a-GC9	
MFI	Myeloid c	Blue.780.60.MI[CD33 on CD33t	GCST90001947	ebi-a-GC9	
MFI	Myeloid c	Blue.780.60.MI[CD33 on CD33c	GCST90001948	ebi-a-GC9	
MFI	Myeloid c	Blue.780.60.MI[CD33 on CD33c	GCST90001949	ebi-a-GC9	
MFI	Myeloid c	Blue.780.60.MI[CD33 on Gr MD	GCST90001950	ebi-a-GC9	
MFI	Myeloid c	Blue.780.60.MI[CD33 on CD66t	GCST90001951	ebi-a-GC9	
MFI	Myeloid c	Blue.780.60.MI[CD33 on Mo M	GCST90001952	ebi-a-GC9	
MFI	Myeloid c	Blue.780.60.MI[CD33 on CD33c	GCST90001953	ebi-a-GC9	
MFI	Myeloid c	Blue.780.60.MI[CD33 on basopl	GCST90001954	ebi-a-GC9	
MFI	Myeloid c	Blue.780.60.MI[CD33 on Im MD	GCST90001955	ebi-a-GC9	
MFI	Myeloid c	Blue.780.60.MI[CD33 on CD33t	GCST90001956	ebi-a-GC9	
MFI	Myeloid c	Blue.780.60.MI[CD33 on CD33t	GCST90001957	ebi-a-GC9	
MFI	TBNK	Blue.780.60.TE[CD4 on monocy	GCST90001958	ebi-a-GC9	
MFI	TBNK	Blue.780.60.TE[CD4 on HLA D	GCST90001959	ebi-a-GC9	
MFI	Treg	Blue.780.60.Tr[CD25 on CD4+	GCST90001960	ebi-a-GC9	
MFI	Treg	Blue.780.60.Tr[CD25 on CD39+	GCST90001961	ebi-a-GC9	
MFI	Treg	Blue.780.60.Tr[CD25 on CD28+	GCST90001962	ebi-a-GC9	
Morphological paramete	cDC	FSC.cDC.trait2	FSC-A on myel	GCST90001963	ebi-a-GC9
Morphological paramete	cDC	FSC.cDC.trait3	FSC-A on plas	GCST90001964	ebi-a-GC9
Morphological paramete	cDC	FSC.cDC.trait4	FSC-A on mono	GCST90001965	ebi-a-GC9
Morphological paramete	cDC	FSC.cDC.trait5	FSC-A on gran	GCST90001966	ebi-a-GC9
Morphological paramete	TBNK	FSC.TBNK.trai	FSC-A on CD14	GCST90001967	ebi-a-GC9
Morphological paramete	TBNK	FSC.TBNK.trai	FSC-A on B cell	GCST90001968	ebi-a-GC9
Morphological paramete	TBNK	FSC.TBNK.trai	FSC-A on NK	GCST90001969	ebi-a-GC9
Morphological paramete	TBNK	FSC.TBNK.trai	FSC-A on HLA	GCST90001970	ebi-a-GC9
Morphological paramete	TBNK	FSC.TBNK.trai	FSC-A on lymph	GCST90001971	ebi-a-GC9
Morphological paramete	TBNK	FSC.TBNK.trai	FSC-A on T cell	GCST90001972	ebi-a-GC9
Morphological paramete	TBNK	FSC.TBNK.trai	FSC-A on CD4+	GCST90001973	ebi-a-GC9
Morphological paramete	TBNK	FSC.TBNK.trai	FSC-A on CD8t	GCST90001974	ebi-a-GC9

Morphological parameter	TBNK	FSC.TBNK.tra	FSC-A on HLA	IGCST90001975	ebi-a-GC
Morphological parameter	TBNK	FSC.TBNK.tra	FSC-A on NKT	GCST90001976	ebi-a-GC
Morphological parameter	TBNK	FSC.TBNK.tra	FSC-A on HLA	GCST90001977	ebi-a-GC
Morphological parameter	TBNK	FSC.TBNK.tra	FSC-A on HLA	GCST90001978	ebi-a-GC
MFI	Monocytemono.tra	CD16 on CD14		GCST90001979	ebi-a-GC
MFI	Monocytemono.tra	CD40 on CD14		GCST90001980	ebi-a-GC
MFI	Monocytemono.tra	CD40 on CD14		GCST90001981	ebi-a-GC
MFI	Monocytemono.tra	CCR2 on CD14		GCST90001982	ebi-a-GC
MFI	Monocytemono.tra	CD14 on CD14		GCST90001983	ebi-a-GC
MFI	Monocytemono.tra	HLA DR on CD1		GCST90001984	ebi-a-GC
MFI	Monocytemono.tra	CD40 on monoc		GCST90001985	ebi-a-GC
MFI	Monocytemono.tra	CD14 on CD14		GCST90001986	ebi-a-GC
MFI	Monocytemono.tra	CD64 on CD14		GCST90001987	ebi-a-GC
MFI	Monocytemono.tra	HLA DR on CD1		GCST90001988	ebi-a-GC
MFI	Monocytemono.tra	CD40 on CD14		GCST90001989	ebi-a-GC
MFI	Monocytemono.tra	CD64 on CD14		GCST90001990	ebi-a-GC
MFI	Monocytemono.tra	HLA DR on CD1		GCST90001991	ebi-a-GC
MFI	Monocytemono.tra	CCR2 on CD14		GCST90001992	ebi-a-GC
MFI	Monocytemono.tra	PDL-1 on CD14		GCST90001993	ebi-a-GC
MFI	Monocytemono.tra	CX3CR1 on CD		GCST90001994	ebi-a-GC
MFI	Monocytemono.tra	CX3CR1 on mo		GCST90001995	ebi-a-GC
MFI	Monocytemono.tra	CX3CR1 on CD		GCST90001996	ebi-a-GC
MFI	Monocytemono.tra	CX3CR1 on CD		GCST90001997	ebi-a-GC
MFI	Monocytemono.tra	PDL-1 on CD14		GCST90001998	ebi-a-GC
MFI	Monocytemono.tra	PDL-1 on CD14		GCST90001999	ebi-a-GC
MFI	Monocytemono.tra	PDL-1 on CD14		GCST90002000	ebi-a-GC
MFI	Monocytemono.tra	CD64 on CD14		GCST90002001	ebi-a-GC
MFI	Monocytemono.tra	PDL-1 on mono		GCST90002002	ebi-a-GC
MFI	Monocytemono.tra	CCR2 on CD14		GCST90002003	ebi-a-GC
MFI	Monocytemono.tra	CCR2 on CD14		GCST90002004	ebi-a-GC
MFI	Monocytemono.tra	CD16 on CD14		GCST90002005	ebi-a-GC
MFI	Monocytemono.tra	CD64 on monoc		GCST90002006	ebi-a-GC
MFI	Monocytemono.tra	HLA DR on CD1		GCST90002007	ebi-a-GC
MFI	Monocytemono.tra	CCR2 on mono		GCST90002008	ebi-a-GC
MFI	Monocytemono.tra	HLA DR on CD1		GCST90002009	ebi-a-GC
MFI	Monocytemono.tra	HLA DR on mor		GCST90002010	ebi-a-GC
MFI	Monocytemono.tra	CD64 on CD14		GCST90002011	ebi-a-GC
MFI	Monocytemono.tra	CX3CR1 on CD		GCST90002012	ebi-a-GC
MFI	cDC	Red.660.20.cD	CCR2 on myelo	GCST90002013	ebi-a-GC
MFI	cDC	Red.660.20.cD	CCR2 on CD62	GCST90002014	ebi-a-GC
MFI	cDC	Red.660.20.cD	CCR2 on plasm	GCST90002015	ebi-a-GC
MFI	cDC	Red.660.20.cD	CCR2 on CD62	GCST90002016	ebi-a-GC
MFI	cDC	Red.660.20.cD	CCR2 on mono	GCST90002017	ebi-a-GC
MFI	cDC	Red.660.20.cD	CCR2 on granul	GCST90002018	ebi-a-GC
MFI	Myeloid c	Red.660.20.MI	CD14 on Mo	GCST90002019	ebi-a-GC

MFI	Myeloid c	Red.660.20.M1CD14 on CD33t	GCST90002020	ebi-a-GC
MFI	Myeloid c	Red.660.20.M1CD14 on CD33	GCST90002021	ebi-a-GC
MFI	Maturatio	Red.660.20.M1CD4 on CD4+	GCST90002022	ebi-a-GC
MFI	Maturatio	Red.660.20.M1CD4 on CM CD	GCST90002023	ebi-a-GC
MFI	Maturatio	Red.660.20.M1CD4 on naive C	GCST90002024	ebi-a-GC
MFI	Maturatio	Red.660.20.M1CD4 on EM CD	GCST90002025	ebi-a-GC
MFI	Maturatio	Red.660.20.M1CD4 on TD CD4	GCST90002026	ebi-a-GC
MFI	Maturatio	Red.660.20.M1CD4 on CD45R	GCST90002027	ebi-a-GC
MFI	TBNK	Red.660.20.TBCD19 on B cell	GCST90002028	ebi-a-GC
MFI	Treg	Red.660.20.TrεCD39 on CD39+	GCST90002029	ebi-a-GC
MFI	Treg	Red.660.20.TrεCD39 on CD39+	GCST90002030	ebi-a-GC
MFI	Treg	Red.660.20.TrεCD39 on CD39+	GCST90002031	ebi-a-GC
MFI	Treg	Red.660.20.TrεCD39 on CD39+	GCST90002032	ebi-a-GC
MFI	Treg	Red.660.20.TrεCD39 on granul	GCST90002033	ebi-a-GC
MFI	Treg	Red.660.20.TrεCD39 on monoc	GCST90002034	ebi-a-GC
MFI	cDC	Red.780.60.cDCD80 on myeloi	GCST90002035	ebi-a-GC
MFI	cDC	Red.780.60.cDCD80 on CD62L	GCST90002036	ebi-a-GC
MFI	cDC	Red.780.60.cDCD80 on plasm	GCST90002037	ebi-a-GC
MFI	cDC	Red.780.60.cDCD80 on CD62L	GCST90002038	ebi-a-GC
MFI	cDC	Red.780.60.cDCD80 on monoc	GCST90002039	ebi-a-GC
MFI	cDC	Red.780.60.cDCD80 on granul	GCST90002040	ebi-a-GC
MFI	Myeloid c	Red.780.60.M1CD45 on lymph	GCST90002041	ebi-a-GC
MFI	Myeloid c	Red.780.60.M1CD45 on CD33t	GCST90002042	ebi-a-GC
MFI	Myeloid c	Red.780.60.M1CD45 on CD33t	GCST90002043	ebi-a-GC
MFI	Myeloid c	Red.780.60.M1CD45 on CD33c	GCST90002044	ebi-a-GC
MFI	Myeloid c	Red.780.60.M1CD45 on CD33-	GCST90002045	ebi-a-GC
MFI	Myeloid c	Red.780.60.M1CD45 on CD33-	GCST90002046	ebi-a-GC
MFI	Myeloid c	Red.780.60.M1CD45 on Gr MD	GCST90002047	ebi-a-GC
MFI	Myeloid c	Red.780.60.M1CD45 on CD66t	GCST90002048	ebi-a-GC
MFI	Myeloid c	Red.780.60.M1CD45 on Mo M1	GCST90002049	ebi-a-GC
MFI	Myeloid c	Red.780.60.M1CD45 on CD33c	GCST90002050	ebi-a-GC
MFI	Myeloid c	Red.780.60.M1CD45 on basopl	GCST90002051	ebi-a-GC
MFI	Myeloid c	Red.780.60.M1CD45 on Im MD	GCST90002052	ebi-a-GC
MFI	Myeloid c	Red.780.60.M1CD45 on CD33t	GCST90002053	ebi-a-GC
MFI	Maturatio	Red.780.60.M1CD8 on CM CD	GCST90002054	ebi-a-GC
MFI	Maturatio	Red.780.60.M1CD8 on naive C	GCST90002055	ebi-a-GC
MFI	Maturatio	Red.780.60.M1CD8 on EM CD	GCST90002056	ebi-a-GC
MFI	Maturatio	Red.780.60.M1CD8 on TD CD	GCST90002057	ebi-a-GC
MFI	TBNK	Red.780.60.TBCD8 on CD8br	GCST90002058	ebi-a-GC
MFI	TBNK	Red.780.60.TBCD8 on NKT	GCST90002059	ebi-a-GC
MFI	TBNK	Red.780.60.TBCD8 on HLA DF	GCST90002060	ebi-a-GC
MFI	Treg	Red.780.60.TrεCD4 on CD39+	GCST90002061	ebi-a-GC
MFI	Treg	Red.780.60.TrεCD4 on CD28+	GCST90002062	ebi-a-GC
MFI	Treg	Red.780.60.TrεCD4 on CD4 Tr	GCST90002063	ebi-a-GC
MFI	Treg	Red.780.60.TrεCD4 on resting	GCST90002064	ebi-a-GC

MFI	Treg	Red.780.60.TrεCD4 on CD39+	GCST90002065	ebi-a-GC	
MFI	Treg	Red.780.60.TrεCD4 on activate	GCST90002066	ebi-a-GC	
MFI	Treg	Red.780.60.TrεCD4 on CD39+	GCST90002067	ebi-a-GC	
MFI	Treg	Red.780.60.TrεCD4 on secretin	GCST90002068	ebi-a-GC	
MFI	Treg	Red.780.60.TrεCD4 on CD39+	GCST90002069	ebi-a-GC	
MFI	Treg	Red.780.60.TrεCD4 on activate	GCST90002070	ebi-a-GC	
Morphological paramete	cDC	SSC.cDC.trait2	SSC-A on myek	GCST90002071	ebi-a-GC
Morphological paramete	cDC	SSC.cDC.trait3	SSC-A on plasn	GCST90002072	ebi-a-GC
Morphological paramete	cDC	SSC.cDC.trait4	SSC-A on monc	GCST90002073	ebi-a-GC
Morphological paramete	TBNK	SSC.TBNK.trai	SSC-A on CD14	GCST90002074	ebi-a-GC
Morphological paramete	TBNK	SSC.TBNK.trai	SSC-A on B cell	GCST90002075	ebi-a-GC
Morphological paramete	TBNK	SSC.TBNK.trai	SSC-A on NK	GCST90002076	ebi-a-GC
Morphological paramete	TBNK	SSC.TBNK.trai	SSC-A on HLA	GCST90002077	ebi-a-GC
Morphological paramete	TBNK	SSC.TBNK.trai	SSC-A on grant	GCST90002078	ebi-a-GC
Morphological paramete	TBNK	SSC.TBNK.trai	SSC-A on lympl	GCST90002079	ebi-a-GC
Morphological paramete	TBNK	SSC.TBNK.trai	SSC-A on T cell	GCST90002080	ebi-a-GC
Morphological paramete	TBNK	SSC.TBNK.trai	SSC-A on CD4+	GCST90002081	ebi-a-GC
Morphological paramete	TBNK	SSC.TBNK.trai	SSC-A on CD8t	GCST90002082	ebi-a-GC
Morphological paramete	TBNK	SSC.TBNK.trai	SSC-A on HLA	GCST90002083	ebi-a-GC
Morphological paramete	TBNK	SSC.TBNK.trai	SSC-A on NKT	GCST90002084	ebi-a-GC
Morphological paramete	TBNK	SSC.TBNK.trai	SSC-A on HLA	GCST90002085	ebi-a-GC
Morphological paramete	TBNK	SSC.TBNK.trai	SSC-A on HLA	GCST90002086	ebi-a-GC
MFI	cDC	Violet.450.50.cCD11c on myek	GCST90002087	ebi-a-GC	
MFI	cDC	Violet.450.50.cCD11c on CD62	GCST90002088	ebi-a-GC	
MFI	cDC	Violet.450.50.cCD11c on monc	GCST90002089	ebi-a-GC	
MFI	cDC	Violet.450.50.cCD11c on grant	GCST90002090	ebi-a-GC	
MFI	Myeloid c	Violet.450.50.MCD11b on CD14	GCST90002091	ebi-a-GC	
MFI	Myeloid c	Violet.450.50. CD11b on Gr M	GCST90002092	ebi-a-GC	
MFI	Myeloid c	Violet.450.50.MCD11b on CD6f	GCST90002093	ebi-a-GC	
MFI	Myeloid c	Violet.450.50.MCD11b on Mo M	GCST90002094	ebi-a-GC	
MFI	Myeloid c	Violet.450.50.MCD11b on CD3f	GCST90002095	ebi-a-GC	
MFI	Myeloid c	Violet.450.50.MCD11b on basoj	GCST90002096	ebi-a-GC	
MFI	Myeloid c	Violet.450.50.MCD11b on CD3f	GCST90002097	ebi-a-GC	
MFI	Maturatio	Violet.450.50.MCD45RA on nai	GCST90002098	ebi-a-GC	
MFI	Maturatio	Violet.450.50.MCD4RA on TD	GCST90002099	ebi-a-GC	
MFI	Maturatio	Violet.450.50.MCD45RA on nai	GCST90002100	ebi-a-GC	
MFI	Maturatio	Violet.450.50.MCD45RA on TD	GCST90002101	ebi-a-GC	
MFI	Treg	Violet.450.50.TCD45RA on res	GCST90002102	ebi-a-GC	
MFI	Treg	Violet.450.50.TCD45RA on CD	GCST90002103	ebi-a-GC	
MFI	cDC	Violet.510.50.cHLA DR on mye	GCST90002104	ebi-a-GC	
MFI	cDC	Violet.510.50.cHLA DR on plas	GCST90002105	ebi-a-GC	
MFI	cDC	Violet.510.50.cHLA DR on DC	GCST90002106	ebi-a-GC	
MFI	Myeloid c	Violet.510.50.MHLA DR on HS	GCST90002107	ebi-a-GC	
MFI	Myeloid c	Violet.510.50.MHLA DR on CDf	GCST90002108	ebi-a-GC	
MFI	Myeloid c	Violet.510.50.MHLA DR on CDf	GCST90002109	ebi-a-GC	

MFI	Myeloid c	Violet.510.50.MHLA DR on CD3	GCST90002110	ebi-a-GC9
MFI	Myeloid c	Violet.510.50.MHLA DR on CD3	GCST90002111	ebi-a-GC9
MFI	Myeloid c	Violet.510.50.MHLA DR on CD3	GCST90002112	ebi-a-GC9
MFI	TBNK	Violet.510.50.THLA DR on HL	GCST90002113	ebi-a-GC9
MFI	TBNK	Violet.510.50.THLA DR on HL	GCST90002114	ebi-a-GC9
MFI	TBNK	Violet.510.50.THLA DR on HL	GCST90002115	ebi-a-GC9
MFI	TBNK	Violet.510.50.THLA DR on B cœ	GCST90002116	ebi-a-GC9
MFI	TBNK	Violet.510.50.THLA DR on HL	GCST90002117	ebi-a-GC9
MFI	Treg	Violet.510.50.TCD8 on CD28+	GCST90002118	ebi-a-GC9
MFI	Treg	Violet.510.50.TCD8 on CD28+	GCST90002119	ebi-a-GC9
MFI	Treg	Violet.510.50.TCD8 on CD28-	GCST90002120	ebi-a-GC9
MFI	Treg	Violet.510.50.TCD8 on CD39+	GCST90002121	ebi-a-GC9

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PKIB		0 1.605195927	0.254	0.982	0
WDR93		0 1.730581914	0.213	0.929	0
CYP2J2		0 -1.6361799	0.191	0.897	0
RAMP3		0 1.379520522	0.254	0.955	0
ITGB6		0 1.509924395	0.211	0.909	0
LUM		0 -1.01268191	0.25	0.927	0
STAB1		0 1.453998281	0.149	0.82	0
AURKB		0 -1.56080098	0.201	0.87	0
ZDHHC1		0 -1.32218511	0.189	0.856	0
SPATA17		0 -1.65736688	0.225	0.89	0
ERG		0 2.131466905	0.235	0.899	0
SDR16C5		0 1.62480221	0.157	0.817	0
MT1G		0 -1.15735719	0.225	0.882	0
KIF14		0 -1.10724772	0.245	0.899	0
SAXO2		0 -1.07435027	0.24	0.883	0
AC008261		0 1.392849294	0.118	0.757	0
CLEC10A		0 -1.92984578	0.183	0.799	0
DRD4		0 2.300659165	0.11	0.715	0
UBE2C		0 -2.01673198	0.171	0.766	0
CLEC4E		0 -1.00806779	0.11	0.666	0
SLC15A2		0 -1.90733124	0.088	0.626	0
TNFAIP6	6.34E-306	1.064739409	0.164	0.792	1.27E-302
CCL13	9.56E-277	1.098963669	0.026	0.427	1.91E-273
ACOD1	6.91E-276	1.20029224	0.13	0.638	1.38E-272
SPATA18	5.33E-275	-1.23017035	0.088	0.608	1.07E-271
TNFRSF9	2.06E-263	1.082961259	0.404	0.965	4.12E-260
DNAH12	6.42E-256	1.072312675	0.155	0.694	1.28E-252
TIMP3	1.34E-240	1.709083677	0.272	0.894	2.68E-237
GPRC5A	5.88E-240	1.425860393	0.182	0.816	1.18E-236
CLDN8	9.94E-238	3.115409319	0.074	0.484	1.99E-234
RHOV	4.52E-234	1.161337386	0.179	0.778	9.05E-231
NPR3	8.00E-230	-1.05030081	0.132	0.61	1.60E-226
CFAP65	1.42E-229	1.921070423	0.147	0.625	2.84E-226
PTPRB	6.43E-227	1.508138236	0.312	0.894	1.29E-223
MT1M	1.91E-217	-1.377514	0.041	0.407	3.81E-214
SFTPA1	2.28E-216	1.490408465	0.17	0.798	4.55E-213
SFTPB	3.56E-216	1.065384534	0.148	0.776	7.13E-213
TRBV14	1.45E-214	2.149842749	0.21	0.747	2.90E-211
TNFSF15	1.46E-210	1.046899835	0.029	0.374	2.93E-207
INMT	3.33E-210	-2.62661441	0.071	0.461	6.66E-207
PTCRA	2.64E-209	3.345670227	0.03	0.38	5.28E-206
TCTEX1C	5.70E-208	-1.93479162	0.03	0.377	1.14E-204
S100A14	5.25E-207	1.181799884	0.097	0.745	1.05E-203
MAPK10	7.41E-207	1.038768267	0.104	0.536	1.48E-203

TEKT2	2.68E-206	-4.65006033	0.014	0.363	5.36E-203
PKMYT1	3.25E-204	-1.12728843	0.113	0.678	6.51E-201
TNNT1	2.83E-202	-3.49261173	0.03	0.394	5.66E-199
ELN	1.87E-197	1.039216518	0.22	0.805	3.73E-194
HES4	8.83E-189	1.20989777	0.437	0.932	1.77E-185
CD248	8.51E-183	-1.52784071	0.119	0.546	1.70E-179
SFTPA2	6.87E-182	1.488411875	0.185	0.755	1.37E-178
DSP	1.80E-179	-2.73331691	0.073	0.474	3.61E-176
DLGAP5	1.75E-169	-1.6095868	0.036	0.34	3.50E-166
FOXP3	7.49E-161	-1.16746399	0.126	0.521	1.50E-157
TRAV16	1.31E-160	-1.2779743	0.239	0.798	2.63E-157
TNXB	3.33E-159	1.614444559	0.053	0.413	6.67E-156
EFNB2	1.02E-155	1.00664035	0.344	0.874	2.05E-152
HDC	2.62E-155	1.058813715	0.133	0.569	5.24E-152
HCAR3	1.20E-154	-1.99440357	0.036	0.495	2.40E-151
TNFRSF1	1.35E-153	1.191698135	0.282	0.836	2.70E-150
ENPP2	1.84E-149	2.015083525	0.258	0.825	3.68E-146
PLEKHH2	5.05E-143	1.305165534	0.102	0.509	1.01E-139
TCIM	4.63E-141	1.43920046	0.225	0.748	9.26E-138
FBLN2	6.90E-141	1.183277929	0.241	0.808	1.38E-137
IGKV3-15	2.43E-140	-3.84333172	0.029	0.465	4.86E-137
SIRPB1	2.23E-139	-1.22288184	0.189	0.702	4.46E-136
TPPP3	6.66E-139	-1.05464021	0.274	0.781	1.33E-135
HSPG2	7.83E-137	1.324624789	0.228	0.776	1.57E-133
ICAM4	1.32E-135	1.0450949	0.09	0.569	2.63E-132
RGS13	5.53E-133	1.261552659	0.108	0.717	1.11E-129
LTC4S	7.28E-132	1.326839509	0.227	0.768	1.46E-128
MECOM	5.18E-131	1.913009692	0.193	0.753	1.04E-127
RAI14	1.27E-130	1.231188701	0.188	0.742	2.53E-127
DNAJC5E	1.74E-129	-1.44261696	0.068	0.604	3.48E-126
LAMP3	2.97E-127	1.085228604	0.278	0.779	5.94E-124
IGFBP5	3.18E-123	1.226722038	0.123	0.681	6.35E-120
TRDV2	2.63E-120	-1.00290788	0.202	0.308	5.26E-117
TNFRSF1	2.38E-119	-6.35579968	0.079	0.411	4.76E-116
SELENBF	1.31E-118	1.039735504	0.084	0.68	2.61E-115
TMEM232	2.70E-114	-1.62558549	0.215	0.726	5.39E-111
LDB2	6.79E-113	1.148546342	0.222	0.752	1.36E-109
LRRC32	1.65E-112	-1.4825376	0.062	0.405	3.30E-109
DTX1	5.44E-111	1.188138976	0.191	0.651	1.09E-107
CD34	2.46E-108	-1.60216446	0.202	0.613	4.91E-105
CFAP70	4.36E-107	-1.63697407	0.14	0.632	8.73E-104
NTRK1	2.04E-104	1.399861479	0.209	0.727	4.07E-101
GATA2	6.83E-103	1.143373947	0.098	0.469	1.37E-99
ELF3	1.53E-99	1.040777287	0.127	0.667	3.06E-96
SEMA3C	3.01E-99	-2.47652973	0.109	0.653	6.03E-96

RSPH4A	7.95E-99	1.524605704	0.133	0.636	1.59E-95
CFAP73	1.47E-98	-2.54074904	0.076	0.468	2.94E-95
CLIC5	4.21E-95	-1.43592024	0.156	0.663	8.41E-92
GTSE1	8.33E-94	-1.32209571	0.147	0.634	1.67E-90
RAMP2	9.05E-92	1.073093815	0.265	0.75	1.81E-88
IGKV1-5	3.64E-90	-3.00329649	0.069	0.513	7.29E-87
TJP1	1.88E-89	-2.95290431	0.028	0.261	3.76E-86
TMEM176	5.25E-86	1.83170557	0.202	0.644	1.05E-82
LCN2	1.01E-85	-3.76511745	0.132	0.312	2.02E-82
ITIH5	9.34E-84	-1.4287535	0.01	0.254	1.87E-80
TNFRSF4	1.59E-82	1.025101347	0.29	0.725	3.18E-79
CNKSR3	2.71E-79	-2.77322879	0.134	0.635	5.41E-76
IGLV3-19	4.45E-79	-2.85047026	0.024	0.418	8.90E-76
CDC42EF	3.98E-78	1.298393191	0.151	0.638	7.97E-75
CKAP2L	3.03E-76	-1.04639501	0.068	0.441	6.07E-73
ZNF750	3.81E-75	-2.26975399	0.078	0.274	7.62E-72
JAM2	1.21E-74	1.707679952	0.117	0.425	2.42E-71
CENPA	8.02E-74	-1.88814942	0.132	0.563	1.60E-70
IL3RA	1.20E-72	-1.64928165	0.213	0.685	2.40E-69
OLFML3	3.70E-72	5.139112963	0.086	0.52	7.41E-69
MFAP4	5.59E-72	2.07368502	0.1	0.537	1.12E-68
EHD2	4.12E-71	-1.23501781	0.015	0.489	8.24E-68
TMEM45A	2.74E-69	-2.45825441	0.021	0.46	5.48E-66
PDLIM3	3.68E-68	1.01403865	0.055	0.253	7.36E-65
LRRC6	6.15E-68	1.139989765	0.025	0.255	1.23E-64
RRAD	4.37E-67	2.140559974	0.33	0.758	8.74E-64
NPW	1.28E-66	-2.06068799	0.146	0.597	2.57E-63
CCDC17	6.33E-66	-1.11932875	0.132	0.342	1.27E-62
LILRB5	5.42E-65	2.648166971	0.035	0.28	1.08E-61
OAF	9.77E-64	1.253222528	0.149	0.627	1.95E-60
SPDEF	1.84E-63	-4.26930768	0.058	0.407	3.69E-60
TRAV23C	4.69E-60	-1.68900373	0.269	0.715	9.38E-57
ZNF683	1.83E-59	-1.07744414	0.164	0.313	3.66E-56
TRAV21	6.81E-58	-1.3762189	0.17	0.64	1.36E-54
MYLK	4.59E-55	1.087696521	0.029	0.263	9.18E-52
LILRB4	1.55E-54	-1.36771418	0.086	0.261	3.11E-51
PLK1	2.76E-54	-1.53284999	0.144	0.635	5.52E-51
TRAV13C	3.78E-54	-2.1752598	0.157	0.319	7.56E-51
PPL	3.04E-52	2.322514948	0.094	0.558	6.09E-49
ALPL	1.46E-51	2.252341626	0.021	0.506	2.91E-48
TRAV8-4	8.20E-51	-1.28104069	0.146	0.358	1.64E-47
DEFB1	3.91E-49	-4.22078243	0.03	0.395	7.82E-46
VCAN	6.38E-49	-2.15807417	0.078	0.488	1.28E-45
EPCAM	6.28E-48	-1.0623015	0.073	0.578	1.26E-44
C4BPA	3.20E-47	2.524466756	0.162	0.638	6.41E-44

AARD	4.13E-47	2.186353168	0.09	0.329	8.25E-44
TRBV4-1	3.16E-46	-1.17284873	0.279	0.68	6.32E-43
MMRN2	1.21E-45	-1.65538605	0.046	0.393	2.42E-42
PODN	2.30E-45	-1.25842494	0.303	0.682	4.59E-42
EGR4	5.65E-45	1.185219398	0.093	0.54	1.13E-41
CNTD1	5.37E-44	-2.13234381	0.054	0.345	1.07E-40
MCAM	2.97E-43	-1.94663283	0.028	0.399	5.93E-40
CTSK	3.91E-43	-1.35183456	0.197	0.625	7.81E-40
MCTP1	4.30E-43	1.742963869	0.3	0.726	8.59E-40
PRSS22	1.28E-41	1.783432986	0.185	0.656	2.55E-38
CDCA2	1.85E-39	-1.00052569	0.229	0.649	3.70E-36
IGHA1	6.52E-39	-2.36404085	0.115	0.588	1.30E-35
MET	9.84E-38	2.352847064	0.015	0.257	1.97E-34
HCK	2.89E-37	-1.31637612	0.095	0.332	5.79E-34
CFAP221	2.56E-36	-1.32004344	0.071	0.341	5.12E-33
KIF20A	3.54E-35	-5.26292554	0.031	0.262	7.08E-32
PTGS2	5.29E-35	1.118491021	0.075	0.303	1.06E-31
CFP	1.30E-34	-2.98607705	0.102	0.532	2.59E-31
MMRN1	1.62E-33	1.324047398	0.073	0.397	3.23E-30
PPIC	5.40E-33	-1.26979225	0.146	0.593	1.08E-29
CLEC3B	7.88E-33	-1.28323764	0.084	0.358	1.58E-29
BAMBI	1.06E-32	1.032090826	0.287	0.666	2.13E-29
MSMB	4.73E-32	2.757905337	0.017	0.406	9.46E-29
MNS1	4.76E-32	1.310590672	0.048	0.301	9.53E-29
TNFRSF1	5.73E-32	1.071636382	0.277	0.646	1.15E-28
NRARP	1.38E-31	1.177775263	0.334	0.745	2.76E-28
TRBV13	4.24E-31	-2.99655353	0.114	0.333	8.48E-28
TCN2	1.14E-30	1.116197819	0.064	0.523	2.29E-27
SDS	3.11E-30	-1.79708808	0.019	0.282	6.22E-27
AGRP	1.91E-29	-1.70592937	0.041	0.316	3.82E-26
IL1A	7.62E-28	-1.28312503	0.101	0.36	1.52E-24
CDS1	3.38E-27	1.243224699	0.149	0.606	6.75E-24
KIF2C	5.27E-27	-1.11982299	0.092	0.52	1.05E-23
NAPSA	1.94E-26	1.83002664	0.112	0.489	3.87E-23
TACC2	1.26E-25	1.522581754	0.083	0.434	2.51E-22
TF	2.13E-24	-2.82044018	0.152	0.523	4.26E-21
EMILIN1	2.55E-24	-1.56727643	0.134	0.389	5.10E-21
GPX3	1.50E-23	1.779717874	0.159	0.599	3.00E-20
IGFBP6	3.39E-23	1.188589957	0.114	0.514	6.78E-20
KRT8	3.76E-22	1.237571892	0.053	0.362	7.52E-19
MUC4	6.70E-22	-5.88999819	0.062	0.284	1.34E-18
CCDC153	9.55E-22	-1.45213177	0.084	0.357	1.91E-18
CTLA4	1.19E-21	-1.27631213	0.159	0.385	2.37E-18
TNFRSF1	7.59E-21	2.042562293	0.19	0.593	1.52E-17
KCNJ15	3.64E-20	-1.54768335	0.113	0.545	7.28E-17

MITF	1.23E-19	1.14844359	0.136	0.56	2.45E-16
CDKN1C	1.65E-19	1.088991805	0.304	0.64	3.30E-16
C7	2.09E-19	4.224242101	0.166	0.584	4.17E-16
TPSB2	5.47E-19	1.270881413	0.144	0.548	1.09E-15
SPARC	1.37E-18	1.145474285	0.09	0.523	2.74E-15
SOX17	2.41E-18	-2.05859186	0.086	0.384	4.83E-15
ANLN	2.68E-18	-1.53261632	0.137	0.419	5.36E-15
S100B	4.20E-18	-2.09672046	0.233	0.457	8.40E-15
KRT5	4.86E-18	1.387719563	0.033	0.476	9.72E-15
RHPN2	6.79E-18	2.218909224	0.015	0.302	1.36E-14
PDZK1IP	1.58E-17	1.120802822	0.08	0.331	3.15E-14
C11orf88	1.85E-17	-1.50507974	0.002	0.332	3.70E-14
SAA2	2.08E-17	-2.33928942	0.082	0.376	4.16E-14
APOC2	2.46E-17	1.058418226	0.249	0.627	4.92E-14
OSCP1	2.59E-17	1.187462143	0.083	0.511	5.19E-14
TPSAB1	7.21E-17	1.270229552	0.096	0.567	1.44E-13
DNAH5	3.03E-16	-3.5189622	0.009	0.41	6.05E-13
FABP3	3.67E-16	2.403845954	0.082	0.376	7.33E-13
IGKV3-20	3.88E-16	-2.53996324	0.031	0.494	7.75E-13
TRBV29-	3.90E-16	1.575734319	0.212	0.579	7.80E-13
TACSTD2	9.08E-16	-1.35188541	0.074	0.365	1.82E-12
TRBV3-1	1.23E-15	-1.70827549	0.152	0.384	2.46E-12
DUOX1	2.12E-15	1.119681761	0.185	0.467	4.25E-12
BCAM	2.61E-15	1.088173404	0.021	0.294	5.21E-12
ABCA1	4.87E-15	1.466981522	0.102	0.502	9.74E-12
CYP27A1	5.23E-15	1.86874162	0.128	0.355	1.05E-11
FAM183A	5.27E-15	-1.99018455	0.048	0.446	1.05E-11
IGHA2	2.02E-14	-2.14051845	0.001	0.259	4.04E-11
DNAAF1	2.76E-14	-1.24080665	0.028	0.323	5.52E-11
PLAU	3.74E-14	1.397298097	0.147	0.568	7.47E-11
CCL2	4.01E-14	1.399979599	0.076	0.357	8.02E-11
CAVIN1	6.33E-14	2.166608852	0.112	0.385	1.27E-10
MACC1	1.24E-13	1.752263681	0.097	0.379	2.48E-10
C11orf96	1.83E-13	1.465640842	0.13	0.509	3.67E-10
FBXO27	2.23E-13	1.261143488	0.094	0.366	4.47E-10
SFTPC	2.46E-13	1.186965369	0.483	0.951	4.91E-10
MMP7	3.03E-13	2.369317693	0.074	0.396	6.06E-10
TRBV12-	3.70E-13	-1.42736337	0.143	0.375	7.40E-10
DDR2	5.05E-13	-1.51017965	0.22	0.572	1.01E-09
BGN	4.29E-12	1.382239195	0.005	0.251	8.59E-09
IGKV4-1	4.69E-12	-1.71723249	0.111	0.513	9.38E-09
TSPAN6	7.73E-12	2.962432363	0.019	0.425	1.55E-08
TRBV18	2.75E-11	-1.0455596	0.168	0.556	5.49E-08
TRBV7-2	6.39E-11	-2.0355023	0.107	0.397	1.28E-07
IGSF10	6.85E-11	4.88282292	0.105	0.523	1.37E-07

IGHV4-5C	1.45E-10	-3.67616171	0	0.306	2.90E-07
IGHG4	5.39E-10	-2.00620797	0.068	0.329	1.08E-06
TSPAN1	1.12E-09	-3.20888228	0.08	0.37	2.25E-06
CPB2	6.53E-09	-1.35782964	0.015	0.269	1.31E-05
LTF	9.25E-09	-1.7982814	0.199	0.558	1.85E-05
PODXL	1.09E-08	-1.29799774	0.043	0.324	2.18E-05
FHAD1	1.95E-08	-1.31602636	0.115	0.432	3.91E-05
CTSG	1.97E-08	1.275806198	0.053	0.302	3.95E-05
TSNAXIP	2.04E-08	-2.84640596	0.089	0.396	4.08E-05
THBS1	2.18E-08	1.177728666	0.295	0.595	4.35E-05
STEAP4	5.50E-08	1.31626627	0.104	0.35	0.00010993194
CXCL5	7.98E-08	-2.40980337	0.064	0.373	0.00015968088
RSPO3	9.67E-08	1.218896033	0.024	0.359	0.00019330038
AKAP12	1.22E-07	1.68314571	0.049	0.458	0.00024399579
CLDN4	1.63E-07	1.420083476	0.13	0.525	0.0003252675
SPAG17	2.78E-07	-1.14007401	0.016	0.261	0.00055577707
VEGFA	2.80E-07	1.418639788	0.101	0.517	0.00056029417
CPM	5.53E-07	2.008483991	0.118	0.517	0.00110584245
ELN-AS1	7.94E-07	1.295969308	0.189	0.47	0.00158880416
SNTN	8.86E-07	-2.40388606	0.045	0.332	0.00177253808
KRT18	2.36E-06	1.510460265	0.157	0.525	0.00472676593
JCAD	3.39E-06	-1.22482317	0.033	0.348	0.00678888517
RSPH1	4.05E-06	1.36626142	0.074	0.397	0.00809964036
IGLV2-14	4.88E-06	-1.39848731	0.24	0.494	0.00975867242
BHLHE41	5.08E-06	1.53252005	0.089	0.356	0.01015632317
CXCL9	5.28E-06	-3.49196398	0.093	0.431	0.01055411624
MSR1	6.72E-06	1.34880672	0.101	0.344	0.01343116265
MMP14	1.86E-05	-2.11098262	0.072	0.436	0.03722335207
CYP4B1	2.35E-05	-1.83097345	0.156	0.538	0.04698889608

id	nsnp	method	b	se	or	or_lci95	or_uci95	pvalue
ebi-a-GCST9000139	8	Inverse var	-0.05937	0.019601	0.942363	0.906846	0.97927	0.002456
ebi-a-GCST9000143	3	Inverse var	-0.08217	0.031496	0.921114	0.865971	0.979768	0.009082
ebi-a-GCST9000145	5	Inverse var	-0.10033	0.031654	0.904536	0.850123	0.962432	0.001526
ebi-a-GCST9000145	19	Inverse var	0.058004	0.014455	1.059719	1.030117	1.090172	6.00E-05
ebi-a-GCST9000146	15	Inverse var	0.059749	0.015522	1.06157	1.02976	1.094363	0.000118
ebi-a-GCST9000146	25	Inverse var	0.062272	0.011303	1.064252	1.040935	1.088091	3.60E-08
ebi-a-GCST9000146	25	Inverse var	0.062272	0.011975	1.064251	1.039562	1.089527	1.99E-07
ebi-a-GCST9000146	27	Inverse var	0.039579	0.01214	1.040373	1.015911	1.065424	0.001113
ebi-a-GCST9000146	26	Inverse var	0.041506	0.012248	1.04238	1.017654	1.067706	0.000702
ebi-a-GCST9000146	3	Inverse var	-0.12999	0.044748	0.878108	0.804373	0.958602	0.003674
ebi-a-GCST9000146	29	Inverse var	0.057029	0.010821	1.058687	1.036468	1.081381	1.36E-07
ebi-a-GCST9000146	30	Inverse var	0.052343	0.010678	1.053737	1.031913	1.076022	9.48E-07
ebi-a-GCST9000147	36	Inverse var	0.041014	0.009358	1.041866	1.022932	1.061152	1.17E-05
ebi-a-GCST9000147	35	Inverse var	0.040643	0.00963	1.04148	1.022006	1.061326	2.44E-05
ebi-a-GCST9000152	5	Inverse var	0.064828	0.022439	1.066975	1.021066	1.114949	0.003864
ebi-a-GCST9000152	5	Inverse var	-0.05348	0.018777	0.947924	0.913671	0.983461	0.004398
ebi-a-GCST9000152	5	Inverse var	0.053875	0.018698	1.055352	1.017375	1.094747	0.003961
ebi-a-GCST9000153	14	Inverse var	0.063555	0.011445	1.065618	1.04198	1.089792	2.81E-08
ebi-a-GCST9000157	9	Inverse var	-0.08999	0.03379	0.913937	0.855369	0.976516	0.007738
ebi-a-GCST9000158	21	Inverse var	-0.06973	0.014777	0.93265	0.906025	0.960057	2.38E-06
ebi-a-GCST9000158	3	Inverse var	0.149661	0.049716	1.161441	1.053605	1.280312	0.00261
ebi-a-GCST9000158	9	Inverse var	-0.08687	0.033793	0.916797	0.858041	0.979577	0.010152
ebi-a-GCST9000158	20	Inverse var	-0.06067	0.013436	0.941131	0.91667	0.966245	6.31E-06
ebi-a-GCST9000158	9	Inverse var	0.0806	0.02833	1.083937	1.02539	1.145827	0.004441
ebi-a-GCST9000158	10	Inverse var	-0.08501	0.027065	0.918502	0.871048	0.968542	0.001684
ebi-a-GCST9000159	6	Inverse var	0.120078	0.051311	1.127585	1.019701	1.246883	0.019272
ebi-a-GCST9000161	7	Inverse var	0.072328	0.023552	1.075008	1.026512	1.125796	0.002133
ebi-a-GCST9000162	12	Inverse var	0.057755	0.022923	1.059455	1.012908	1.108141	0.011753
ebi-a-GCST9000162	9	Inverse var	0.091163	0.037375	1.095448	1.018068	1.178708	0.014723
ebi-a-GCST9000163	3	Inverse var	0.147809	0.045475	1.159292	1.060434	1.267366	0.001153
ebi-a-GCST9000164	21	Inverse var	-0.0504	0.015253	0.950849	0.922843	0.979704	0.000952
ebi-a-GCST9000164	24	Inverse var	-0.05177	0.014161	0.949546	0.923554	0.97627	0.000256
ebi-a-GCST9000165	24	Inverse var	-0.04562	0.014199	0.955405	0.929182	0.982368	0.001314
ebi-a-GCST9000170	128	Inverse var	-0.01246	0.005203	0.987621	0.9776	0.997744	0.016661
ebi-a-GCST9000170	124	Inverse var	-0.01096	0.005276	0.989098	0.978923	0.999379	0.037731
ebi-a-GCST9000170	118	Inverse var	-0.01309	0.00541	0.986999	0.976587	0.997521	0.01557
ebi-a-GCST9000170	59	Inverse var	-0.01272	0.006152	0.987359	0.975525	0.999337	0.038663
ebi-a-GCST9000170	123	Inverse var	-0.01171	0.00544	0.988361	0.977878	0.998957	0.031407
ebi-a-GCST9000171	109	Inverse var	-0.01228	0.006038	0.987794	0.976172	0.999553	0.041952
ebi-a-GCST9000171	112	Inverse var	-0.01193	0.005871	0.988139	0.976834	0.999575	0.042104
ebi-a-GCST9000171	127	Inverse var	-0.01184	0.005363	0.988227	0.977894	0.998669	0.027219
ebi-a-GCST9000171	11	Inverse var	-0.08353	0.029152	0.919861	0.868775	0.973951	0.004165
ebi-a-GCST9000171	128	Inverse var	-0.01299	0.005259	0.987092	0.976969	0.997319	0.013497
ebi-a-GCST9000171	116	Inverse var	-0.01159	0.005749	0.988481	0.977406	0.999682	0.043867
ebi-a-GCST9000171	127	Inverse var	-0.01171	0.005257	0.988354	0.978222	0.99859	0.02585
ebi-a-GCST9000171	125	Inverse var	-0.01146	0.005533	0.988606	0.977943	0.999385	0.038339
ebi-a-GCST9000171	122	Inverse var	-0.01133	0.00542	0.988732	0.978285	0.99929	0.036528

ebi-a-GCST9000172 97 Inverse v_ε -0.01784 0.005786 0.98232 0.971242 0.993525 0.002051
ebi-a-GCST9000174 10 Inverse v_ε -0.07213 0.024495 0.930411 0.886797 0.97617 0.003233
ebi-a-GCST9000174 8 Inverse v_ε -0.06099 0.024784 0.940829 0.896218 0.98766 0.013855
ebi-a-GCST9000175 17 Inverse v_ε -0.05216 0.019538 0.949174 0.913514 0.986226 0.007588
ebi-a-GCST9000175 10 Inverse v_ε -0.05174 0.022727 0.949574 0.908205 0.992828 0.022804
ebi-a-GCST9000176 9 Inverse v_ε -0.05525 0.023882 0.946252 0.90298 0.991597 0.020703
ebi-a-GCST9000179 34 Inverse v_ε 0.025804 0.011302 1.02614 1.00366 1.049124 0.022416
ebi-a-GCST9000180 20 Inverse v_ε 0.039346 0.012342 1.04013 1.015271 1.065597 0.001432
ebi-a-GCST9000180 16 Inverse v_ε 0.040166 0.010623 1.040984 1.019533 1.062886 0.000156
ebi-a-GCST9000180 24 Inverse v_ε 0.042846 0.013383 1.043777 1.016753 1.071519 0.001367
ebi-a-GCST9000180 31 Inverse v_ε 0.030222 0.01121 1.030684 1.008284 1.053581 0.007019
ebi-a-GCST9000180 24 Inverse v_ε 0.037616 0.013313 1.038332 1.011589 1.065783 0.004721
ebi-a-GCST9000180 26 Inverse v_ε 0.049522 0.0118 1.050768 1.026746 1.075353 2.71E-05
ebi-a-GCST9000180 33 Inverse v_ε 0.030011 0.01075 1.030466 1.008981 1.052408 0.005243
ebi-a-GCST9000182 116 Inverse v_ε -0.01297 0.005456 0.987113 0.976613 0.997727 0.017447
ebi-a-GCST9000183 3 Inverse v_ε -0.14905 0.055046 0.861528 0.773417 0.959677 0.006775
ebi-a-GCST9000183 5 Inverse v_ε 0.05214 0.022257 1.053523 1.008552 1.100499 0.01915
ebi-a-GCST9000183 9 Inverse v_ε 0.039313 0.017653 1.040096 1.004725 1.076712 0.025946
ebi-a-GCST9000186 4 Inverse v_ε 0.07008 0.035282 1.072594 1.000929 1.14939 0.046999
ebi-a-GCST9000188 22 Inverse v_ε 0.032971 0.013276 1.033521 1.006974 1.060768 0.013011
ebi-a-GCST9000189 5 Inverse v_ε -0.05922 0.022738 0.942496 0.901415 0.98545 0.009199
ebi-a-GCST9000189 28 Inverse v_ε -0.0277 0.009996 0.972684 0.953813 0.991928 0.005592
ebi-a-GCST9000189 9 Inverse v_ε -0.05209 0.017118 0.949239 0.917919 0.981627 0.00234
ebi-a-GCST9000190 7 Inverse v_ε 0.048534 0.024349 1.049731 1.00081 1.101043 0.046235
ebi-a-GCST9000197 15 Inverse v_ε -0.0675 0.017327 0.934728 0.903516 0.967018 9.80E-05
ebi-a-GCST9000197 79 Inverse v_ε -0.02333 0.006614 0.976942 0.964359 0.989689 0.00042
ebi-a-GCST9000198 14 Inverse v_ε -0.0478 0.01437 0.953326 0.926849 0.980559 0.00088
ebi-a-GCST9000198 23 Inverse v_ε -0.03797 0.01349 0.962743 0.937621 0.988539 0.004886
ebi-a-GCST9000198 23 Inverse v_ε -0.04681 0.012925 0.954273 0.930401 0.978757 0.000293
ebi-a-GCST9000198 38 Inverse v_ε -0.0366 0.01057 0.964058 0.944291 0.984239 0.000534
ebi-a-GCST9000199 14 Inverse v_ε 0.084478 0.019489 1.088149 1.047367 1.130518 1.46E-05
ebi-a-GCST9000199 13 Inverse v_ε 0.048505 0.017957 1.049701 1.013398 1.087304 0.00691
ebi-a-GCST9000199 11 Inverse v_ε 0.055097 0.018539 1.056643 1.018937 1.095745 0.00296
ebi-a-GCST9000199 17 Inverse v_ε 0.045836 0.016591 1.046903 1.013407 1.081506 0.005733
ebi-a-GCST9000199 11 Inverse v_ε -0.05899 0.02119 0.942719 0.904367 0.982697 0.005374
ebi-a-GCST9000200 3 Inverse v_ε 0.088548 0.034162 1.092586 1.021825 1.168248 0.009542
ebi-a-GCST9000201 56 Inverse v_ε -0.02558 0.011977 0.974741 0.952126 0.997893 0.032674
ebi-a-GCST9000201 7 Inverse v_ε 0.063899 0.023116 1.065984 1.018764 1.115393 0.005706
ebi-a-GCST9000202 5 Inverse v_ε -0.06572 0.02983 0.936389 0.88321 0.992769 0.027576
ebi-a-GCST9000203 4 Inverse v_ε -0.13655 0.042736 0.87236 0.802266 0.948578 0.001397
ebi-a-GCST9000203 16 Inverse v_ε -0.0401 0.013105 0.960692 0.936331 0.985687 0.002212
ebi-a-GCST9000208 4 Inverse v_ε -0.06627 0.033732 0.935874 0.876 0.99984 0.049445
ebi-a-GCST9000209 4 Inverse v_ε -0.05936 0.020026 0.942363 0.906092 0.980087 0.003033
ebi-a-GCST9000211 40 Inverse v_ε 0.023058 0.009803 1.023326 1.003852 1.043177 0.018663
ebi-a-GCST9000211 41 Inverse v_ε -0.03122 0.012731 0.969264 0.945378 0.993753 0.014197

id	nsnp.x	method.x	b.x	se.x	or.x	or_lci95.x	or_uci95.x	pvalue.x	nsnp.y
ebi-a-GC	9	Inverse var	0.172838	0.084012	1.188674	1.008208	1.401443	0.039657	3
ebi-a-GC	9	Inverse var	0.163208	0.079305	1.177282	1.007801	1.375264	0.039592	128
ebi-a-GC	9	Inverse var	0.159204	0.079211	1.172578	1.003959	1.369516	0.044443	128
ebi-a-GC	9	Inverse var	0.155524	0.079228	1.16827	1.000237	1.364532	0.049648	127
ebi-a-GC	9	Inverse var	0.171756	0.079379	1.187388	1.016305	1.38727	0.030484	125
ebi-a-GC	9	Inverse var	0.157801	0.077946	1.170934	1.00504	1.36421	0.042919	10
ebi-a-GC	9	Inverse var	0.178953	0.078711	1.195964	1.024987	1.395463	0.022993	23
ebi-a-GC	9	Inverse var	0.205356	0.079225	1.227963	1.051351	1.434242	0.00954	56
ebi-a-GC	9	Inverse var	-0.22902	0.086362	0.795312	0.671466	0.941999	0.008005	5

method.y	b.y	se.y	or.y	or_lci95.y	or_uci95.y	pvalue.y	beta_all	beta1	beta2
Inverse v ϵ	0.149661	0.049716	1.161441	1.053605	1.280312	0.00261	0.085763	0.172838	0.149661
Inverse v ϵ	-0.01246	0.005203	0.987621	0.9776	0.997744	0.016661	0.085763	0.163208	-0.01246
Inverse v ϵ	-0.01299	0.005259	0.987092	0.976969	0.997319	0.013497	0.085763	0.159204	-0.01299
Inverse v ϵ	-0.01171	0.005257	0.988354	0.978222	0.99859	0.02585	0.085763	0.155524	-0.01171
Inverse v ϵ	-0.01146	0.005533	0.988606	0.977943	0.999385	0.038339	0.085763	0.171756	-0.01146
Inverse v ϵ	-0.07213	0.024495	0.930411	0.886797	0.97617	0.003233	0.085763	0.157801	-0.07213
Inverse v ϵ	-0.03797	0.01349	0.962743	0.937621	0.988539	0.004886	0.085763	0.178953	-0.03797
Inverse v ϵ	-0.02558	0.011977	0.974741	0.952126	0.997893	0.032674	0.085763	0.205356	-0.02558
Inverse v ϵ	-0.06572	0.02983	0.936389	0.88321	0.992769	0.027576	0.085763	-0.22902	-0.06572

beta12	beta_dir	se	Z	P	lci	uci	beta12_p	lci_p	uci_p
0.025867	0.059896	0.016316	1.585401	0.112875	-0.00611	0.057846	0.301611	-0.07126	0.674486
-0.00203	0.087796	0.012943	-0.15707	0.87519	-0.0274	0.023336	-0.0237	-0.31951	0.272097
-0.00207	0.087832	0.012611	-0.16402	0.869718	-0.02679	0.022649	-0.02412	-0.31232	0.264086
-0.00182	0.087585	0.012322	-0.14786	0.882454	-0.02597	0.022329	-0.02124	-0.30285	0.26036
-0.00197	0.087732	0.013634	-0.14437	0.885212	-0.02869	0.024754	-0.02295	-0.33453	0.288633
-0.01138	0.097145	0.012426	-0.91597	0.359682	-0.03574	0.012973	-0.13271	-0.4167	0.151269
-0.00679	0.092558	0.014095	-0.48206	0.629761	-0.03442	0.020831	-0.07922	-0.40134	0.242893
-0.00525	0.091017	0.016272	-0.32286	0.746801	-0.03715	0.02664	-0.06126	-0.43314	0.31062
0.015052	0.070711	0.019876	0.757319	0.448859	-0.0239	0.054009	0.17551	-0.27872	0.629742

id	nsnp.x	method.x	b.x	se.x	or.x	or_lci95.x	or_uci95.x	pvalue.x	nsnp.y
ebi-a-GC	208	Inverse var	-0.2558	0.089754	0.774295	0.649391	0.923223	0.004371	8
ebi-a-GC	208	Inverse var	0.181635	0.091438	1.199177	1.002419	1.434555	0.046986	3
ebi-a-GC	208	Inverse var	0.232269	0.087229	1.261459	1.063218	1.496662	0.00775	7
ebi-a-GC	208	Inverse var	0.187783	0.084116	1.206572	1.023181	1.422834	0.025586	12
ebi-a-GC	208	Inverse var	0.188945	0.089399	1.207974	1.013817	1.439315	0.034558	9
ebi-a-GC	208	Inverse var	0.27096	0.08846	1.311222	1.102497	1.559464	0.002191	34
ebi-a-GC	208	Inverse var	0.273571	0.089742	1.314651	1.102607	1.567473	0.0023	20
ebi-a-GC	208	Inverse var	0.326278	0.121852	1.385801	1.091385	1.75964	0.007414	16
ebi-a-GC	208	Inverse var	0.387171	0.089338	1.472809	1.236233	1.754658	1.47E-05	24
ebi-a-GC	208	Inverse var	0.29311	0.089928	1.340591	1.123952	1.598986	0.001117	24
ebi-a-GC	208	Inverse var	0.212759	0.089269	1.237087	1.038516	1.473626	0.017156	26
ebi-a-GC	208	Inverse var	0.243832	0.089169	1.276129	1.071501	1.519836	0.006248	33

method.y	b.y	se.y	or.y	or_lci95.y	or_uci95.y	pvalue.y	beta_all	beta1	beta2
Inverse vε	-0.05937	0.019601	0.942363	0.906846	0.97927	0.002456	0.63619	-0.2558	-0.05937
Inverse vε	0.149661	0.049716	1.161441	1.053605	1.280312	0.00261	0.63619	0.181635	0.149661
Inverse vε	0.072328	0.023552	1.075008	1.026512	1.125796	0.002133	0.63619	0.232269	0.072328
Inverse vε	0.057755	0.022923	1.059455	1.012908	1.108141	0.011753	0.63619	0.187783	0.057755
Inverse vε	0.091163	0.037375	1.095448	1.018068	1.178708	0.014723	0.63619	0.188945	0.091163
Inverse vε	0.025804	0.011302	1.02614	1.00366	1.049124	0.022416	0.63619	0.27096	0.025804
Inverse vε	0.039346	0.012342	1.04013	1.015271	1.065597	0.001432	0.63619	0.273571	0.039346
Inverse vε	0.040166	0.010623	1.040984	1.019533	1.062886	0.000156	0.63619	0.326278	0.040166
Inverse vε	0.042846	0.013383	1.043777	1.016753	1.071519	0.001367	0.63619	0.387171	0.042846
Inverse vε	0.037616	0.013313	1.038332	1.011589	1.065783	0.004721	0.63619	0.29311	0.037616
Inverse vε	0.049522	0.0118	1.050768	1.026746	1.075353	2.71E-05	0.63619	0.212759	0.049522
Inverse vε	0.030011	0.01075	1.030466	1.008981	1.052408	0.005243	0.63619	0.243832	0.030011

beta12	beta_dir	se	Z	P	lci	uci	beta12_p	lci_p	uci_p
0.015186	0.621004	0.022989	0.660574	0.508886	-0.02987	0.060244	0.02387	-0.04695	0.094694
0.027184	0.609006	0.018199	1.493699	0.135254	-0.00849	0.062854	0.042729	-0.01334	0.098797
0.0168	0.61939	0.020332	0.826265	0.408654	-0.02305	0.05665	0.026407	-0.03623	0.089046
0.010845	0.625344	0.015851	0.684207	0.493844	-0.02022	0.041913	0.017047	-0.03179	0.065882
0.017225	0.618965	0.017232	0.999597	0.317506	-0.01655	0.050999	0.027075	-0.02601	0.080163
0.006992	0.629198	0.023971	0.291685	0.770528	-0.03999	0.053975	0.01099	-0.06286	0.084841
0.010764	0.625426	0.024556	0.438347	0.661135	-0.03737	0.058893	0.016919	-0.05873	0.092571
0.013105	0.623084	0.03976	0.32961	0.741694	-0.06482	0.091035	0.0206	-0.10189	0.143094
0.016589	0.619601	0.034594	0.479528	0.631563	-0.05122	0.084393	0.026075	-0.0805	0.132654
0.011026	0.625164	0.026364	0.418214	0.675791	-0.04065	0.062698	0.017331	-0.06389	0.098553
0.010536	0.625653	0.019002	0.554485	0.579247	-0.02671	0.04778	0.016561	-0.04198	0.075103
0.007318	0.628872	0.021745	0.336526	0.736474	-0.0353	0.049937	0.011502	-0.05549	0.078494

STROBE-MR checklist of recommended items to address in reports of Mendelian randomization studies^{1 2}

Item No.	Section	Checklist item	Page No.	Relevant text from manuscript
1	TITLE and ABSTRACT	Indicate Mendelian randomization (MR) as the study's design in the title and/or the abstract if that is a main purpose of the study	Page 1-2	Title, abstract/paragraph 2
INTRODUCTION				
2	Background	Explain the scientific background and rationale for the reported study. What is the exposure? Is a potential causal relationship between exposure and outcome plausible? Justify why MR is a helpful method to address the study question	Page 4	Introduction/paragraph 4
3	Objectives	State specific objectives clearly, including pre-specified causal hypotheses (if any). State that MR is a method that, under specific assumptions, intends to estimate causal effects	Page 4	Introduction/paragraph 4
METHODS				
4	Study design and data sources	Present key elements of the study design early in the article. Consider including a table listing sources of data for all phases of the study. For each data source contributing to the analysis, describe the following:	Page 5	Methods/paragraph 1
	a)	Setting: Describe the study design and the underlying population, if possible. Describe the setting, locations, and relevant dates, including periods of recruitment, exposure, follow-up, and data collection, when available.	Page 6	Methods/paragraph 4
	b)	Participants: Give the eligibility criteria, and the sources and methods of selection of participants. Report the sample size, and whether any power or sample size calculations were carried out prior to the main analysis	Page 6	Methods/paragraph 5
	c)	Describe measurement, quality control and selection of genetic variants	Page 6-7	Methods/paragraph 5
	d)	For each exposure, outcome, and other relevant variables, describe methods of assessment and diagnostic criteria for diseases	Page 6-7	Methods/paragraph 5
	e)	Provide details of ethics committee approval and participant informed consent, if relevant	NA: The data utilized in this study have all been previously published, thus obviating the requirement for ethical approval and consent to participate.	NA

5	Assumptions	Explicitly state the three core IV assumptions for the main analysis (relevance, independence and exclusion restriction) as well assumptions for any additional or sensitivity analysis	Page 6	Methods/paragraph 1
6	Statistical methods: main analysis	Describe statistical methods and statistics used	Page 6-7	Methods/paragraph 5
	a)	Describe how quantitative variables were handled in the analyses (i.e., scale, units, model)	Page 6-7	Methods/paragraph 5
	b)	Describe how genetic variants were handled in the analyses and, if applicable, how their weights were selected	Page 6-7	Methods/paragraph 5
	c)	Describe the MR estimator (e.g. two-stage least squares, Wald ratio) and related statistics. Detail the included covariates and, in case of two-sample MR, whether the same covariate set was used for adjustment in the two samples	Page 6-7	Methods/paragraph 5
	d)	Explain how missing data were addressed	NA: Missing data codes are automatically filtered out of the analysis when it is performed, and this description is not presented in the main text.	NA
	e)	If applicable, indicate how multiple testing was addressed	NA: There is no batch analysis in this paper, and the issue of multiple testing is not addressed	NA
7	Assessment of assumptions	Describe any methods or prior knowledge used to assess the assumptions or justify their validity	Page 6-7	Methods/paragraph 5
8	Sensitivity analyses and additional analyses	Describe any sensitivity analyses or additional analyses performed (e.g. comparison of effect estimates from different approaches, independent replication, bias analytic techniques, validation of instruments, simulations)	Page 6-7	Methods/paragraph 5
9	Software and pre-registration			
	a)	Name statistical software and package(s), including version and settings used	Page 6-7	Methods/paragraph 5
	b)	State whether the study protocol and details were pre-registered (as well as when and where)	NA: The data used in the analysis of the article had	NA

been published prior to the analysis of the article, and the research protocol and detailed information were conceptualized and adapted during the course of the analysis, and were not pre-registered.

RESULTS

10	Descriptive data		
	a) Report the numbers of individuals at each stage of included studies and reasons for exclusion. Consider use of a flow diagram	Page 8	Results/paragraph 3-4
	b) Report summary statistics for phenotypic exposure(s), outcome(s), and other relevant variables (e.g. means, SDs, proportions)	NA: This information is described in the databases used, so it is not shown in the article.	NA
	c) If the data sources include meta-analyses of previous studies, provide the assessments of heterogeneity across these studies	NA: The data used in the analysis of the article is not derived from a meta-analysis.	NA
	d) For two-sample MR: <ul style="list-style-type: none"> i. Provide justification of the similarity of the genetic variant-exposure associations between the exposure and outcome samples ii. Provide information on the number of individuals who overlap between the exposure and outcome studies 	NA: Our exposures were obtained from European and Icelandic populations, while the outcome data came from Finnish participants. The samples did not overlap; therefore, the sample overlap rate was not calculated in the analyses. Additionally, we used SNPs with an F-statistic greater than 10 to ensure that the samples remained independent.	NA
11	Main results		
	a) Report the associations between genetic variant and exposure, and between genetic variant and outcome, preferably on an interpretable scale	Page 8	Results/paragraph 5

	b)	Report MR estimates of the relationship between exposure and outcome, and the measures of uncertainty from the MR analysis, on an interpretable scale, such as odds ratio or relative risk per SD difference	Page 8	Results/paragraph 5
	c)	If relevant, consider translating estimates of relative risk into absolute risk for a meaningful time period	NA: Not relevant to this article.	NA
	d)	Consider plots to visualize results (e.g. forest plot, scatterplot of associations between genetic variants and outcome versus between genetic variants and exposure)	Page 8,10	Results/paragraph 5,11
12	Assessment of assumptions			
	a)	Report the assessment of the validity of the assumptions	Page 8	Results/paragraph 6
	b)	Report any additional statistics (e.g., assessments of heterogeneity across genetic variants, such as I^2 , Q statistic or E-value)	Page 8	Results/paragraph 6
13	Sensitivity analyses and additional analyses			
	a)	Report any sensitivity analyses to assess the robustness of the main results to violations of the assumptions	Page 8	Results/paragraph 6-7
	b)	Report results from other sensitivity analyses or additional analyses	Page 8	Results/paragraph 6-7
	c)	Report any assessment of direction of causal relationship (e.g., bidirectional MR)	NA: available genetic instruments for COPD were not used to explore the reverse causality in this analysis.	NA
	d)	When relevant, report and compare with estimates from non-MR analyses	N/A: There are no relevant large cohort studies or clinical trials.	NA
	e)	Consider additional plots to visualize results (e.g., leave-one-out analyses)	Page 10	Results/paragraph 10
DISCUSSION				
14	Key results	Summarize key results with reference to study objectives	Page 11	Discussion/Paragraph 1
15	Limitations	Discuss limitations of the study, taking into account the validity of the IV assumptions, other sources of potential bias, and imprecision. Discuss	Page 14	Discussion/Paragraph 7

both direction and magnitude of any potential bias and any efforts to address them

16	Interpretation			
	a)	Meaning: Give a cautious overall interpretation of results in the context of their limitations and in comparison with other studies	Page 15	Discussion/Paragraph 7-8
	b)	Mechanism: Discuss underlying biological mechanisms that could drive a potential causal relationship between the investigated exposure and the outcome, and whether the gene-environment equivalence assumption is reasonable. Use causal language carefully, clarifying that IV estimates may provide causal effects only under certain assumptions	Page 13	Discussion/Paragraph 5
	c)	Clinical relevance: Discuss whether the results have clinical or public policy relevance, and to what extent they inform effect sizes of possible interventions	NA: The study is about the relationship between OAF and COPD and does not involve clinical guidance on some treatments.	NA
17	Generalizability	Discuss the generalizability of the study results (a) to other populations, (b) across other exposure periods/timings, and (c) across other levels of exposure	Page 14	Discussion/Paragraph 6-7
OTHER INFORMATION				
18	Funding	Describe sources of funding and the role of funders in the present study and, if applicable, sources of funding for the databases and original study or studies on which the present study is based	Page 16	Funding
19	Data and data sharing	Provide the data used to perform all analyses or report where and how the data can be accessed, and reference these sources in the article. Provide the statistical code needed to reproduce the results in the article, or report whether the code is publicly accessible and if so, where	Page 16	Data Availability
20	Conflicts of Interest	All authors should declare all potential conflicts of interest	Page 16	Disclosure

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1. Skrivankova VW, Richmond RC, Woolf BAR, Yarmolinsky J, Davies NM, Swanson SA, et al. Strengthening the Reporting of Observational Studies in Epidemiology using Mendelian Randomization (STROBE-MR) Statement. JAMA. 2021;under review.
2. Skrivankova VW, Richmond RC, Woolf BAR, Davies NM, Swanson SA, VanderWeele TJ, et al. Strengthening the Reporting of Observational Studies in Epidemiology using Mendelian Randomisation (STROBE-MR): Explanation and Elaboration. BMJ. 2021;375:n2233.

