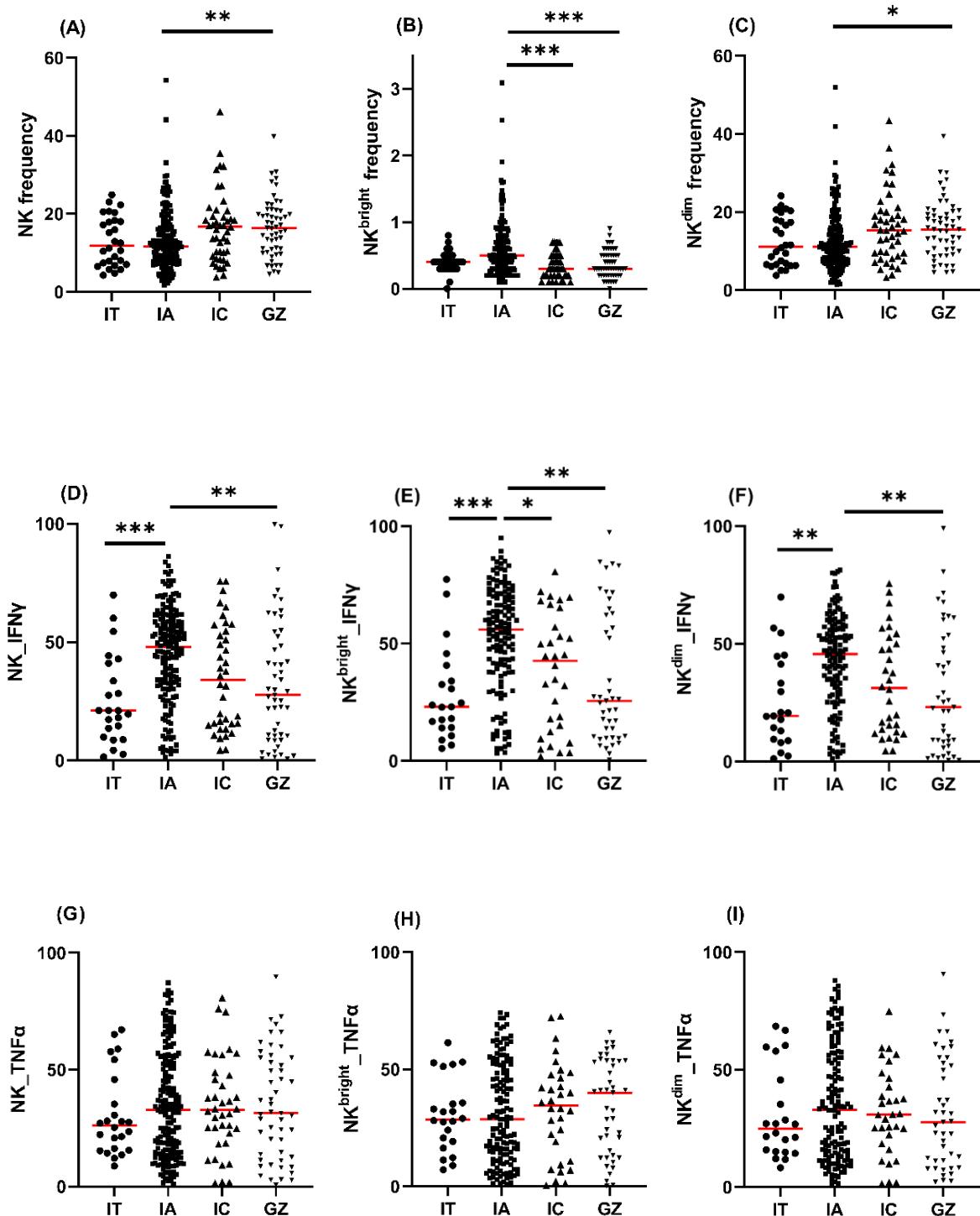


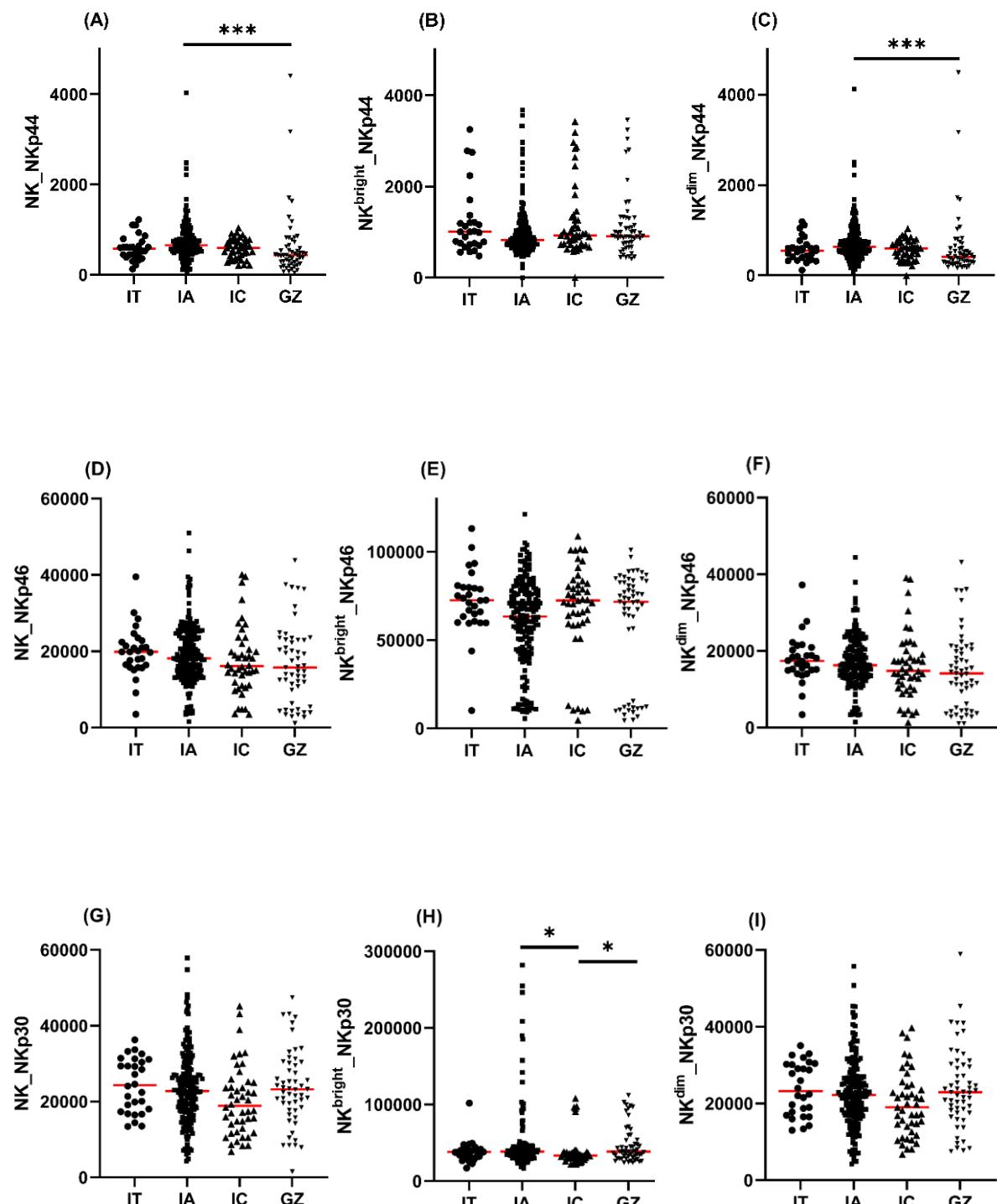
Supplementary Figure 1. Liver inflammation, fibrosis, virological characteristics significantly differed among groups.

HBsAg (A), HBV DNA(B), AST(C), ALT(D), TBIL(E), FibroScan(F), ALB(G) and GLB(H) levels significantly differed among groups.



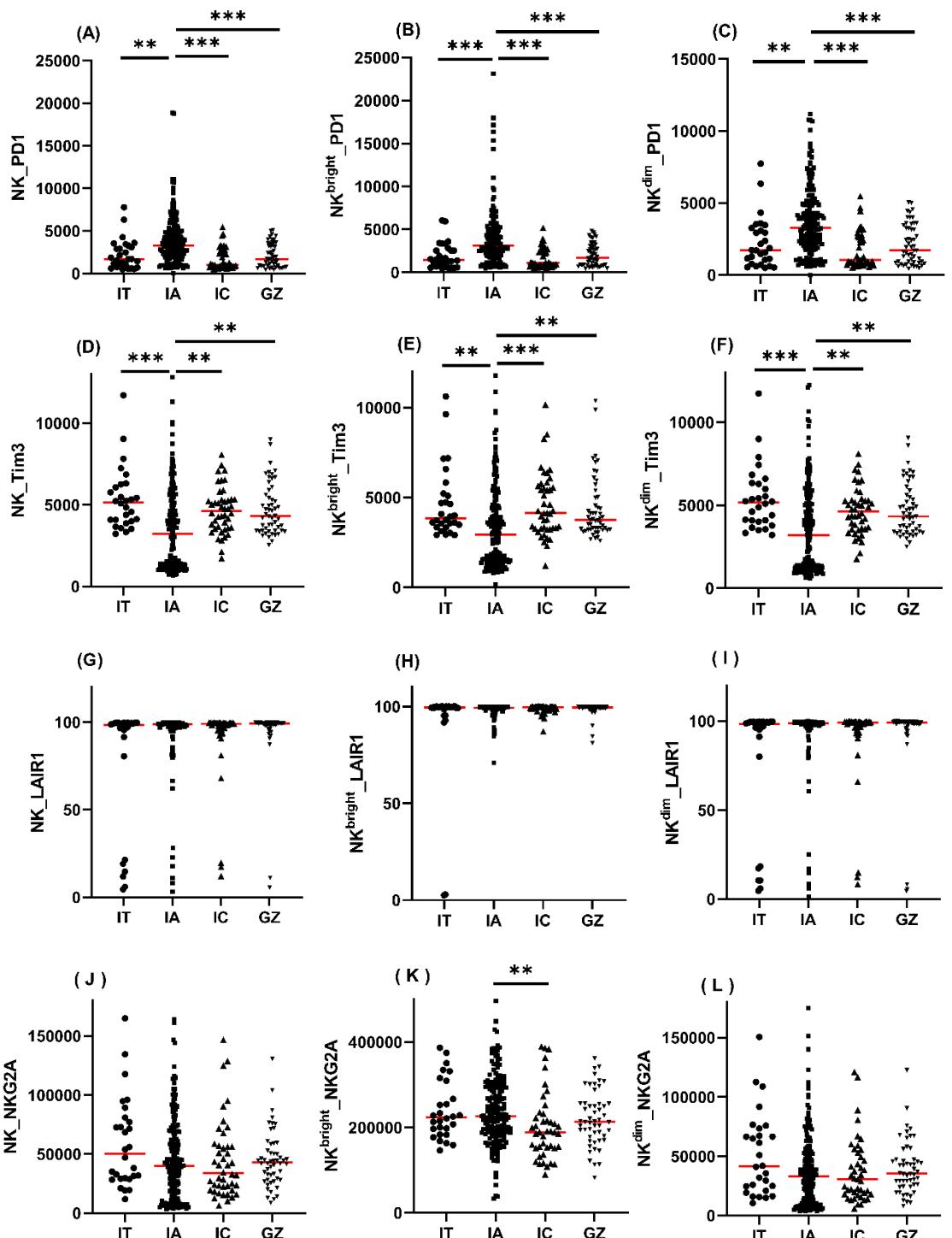
Supplementary Figure 2. NK cell and subset frequencies and antiviral cytokine (IFN- γ and TNF- α) production significantly differed among groups.

NK cell and subset frequencies(A-C) and IFN- γ (D-F) and TNF- α (G-I) production significantly differed among groups.



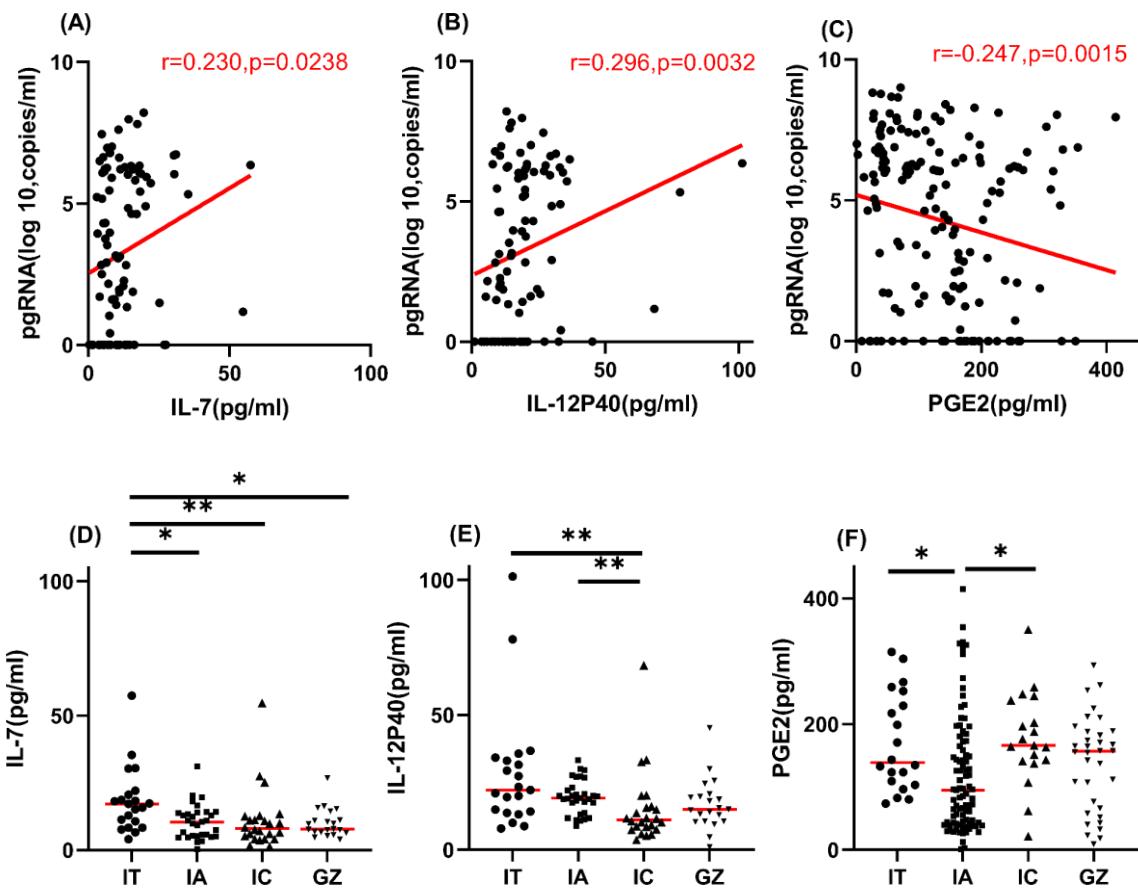
Supplementary Figure 3. Activation markers (NKP44, NKP46 and NKp30) on NK cells and subsets significantly differed among groups.

NKP44(A-C), NKP46(D-F) and NKp30(G-I) on NK cells and subsets significantly differed among groups.



Supplementary Figure 4. Inhibitory markers (PD1, Tim3, LAIR1 and NKG2A) on NK cells and subsets significantly differed among groups.

PD1(A-C), Tim3(D-F), LAIR1(G-I) and NKG2A(J-L) on NK cells and subsets significantly differed among groups.



Supplementary Figure 5. Correlations of serum HBV pgRNA with NK cell-related serum cytokines (IL-7, IL-12P40 and PGE2) and differences of NK cell-related serum cytokines among groups.

(A-C) Correlations of serum HBV pgRNA with NK cell-related serum cytokines (IL-7, IL-12P40 and PGE2). (D-F) NK cell-related serum cytokines (IL-7, IL-12P40, and PGE2) significantly differed among groups.

Supplementary Table 1. Univariate and multivariate linear regression analysis of factors of HBV virological Characteristics , liver inflammation and fibrosis associated with serum pgRNA

	Univariate			Multivariate		
	B	95% CI	P value	B	95% CI	P value
Log HBV DNA	0.903	0.810, 0.980	0.000	0.564	0.424, 0.705	0.000
HBsAb (positive)	0.791	-0.331, 1.913	0.167	0.043	-0.263, 1.152	0.232
HBcAb	-3.731	-19.104, 10.561	0.624	-0.065	-17.827, 0.863	0.070
Log HBsAg	1.845	1.543, 2.092	0.000	0.094	0.043, 0.662	0.059
HBeAb	0.367	0.291, 0.439	0.000	-0.033	-0.103, 0.038	0.483
HBeAg (positive)	4.341	3.885, 4.796	0.000	2.097	1.399, 2.795	0.000
AST	0.007	0.004, 0.009	0.000	-0.045	-0.008, 0.005	0.702
ALT	0.006	0.005, 0.008	0.000	0.005	0.002, 0.007	0.000
TBIL	0.019	0.005, 0.033	0.008	-0.041	-0.035, 0.019	0.552
Fibroscan	0.155	0.102, 0.209	0.000	0.089	0.028, 0.149	0.004
ALB	-0.219	-0.315, -0.122	0.000	-0.124	-0.521, 0.087	0.065
GLB	-0.005	-0.090, 0.081	0.915	-0.011	-0.291, 0.596	0.859

Abbreviations: pgRNA, pregenomic RNA ; CI, confidence interval; HBV, hepatitis B virus; HBsAg, hepatitis B surface antigen; HBcAb: hepatitis B core antibody ;HBeAb, antibody to HBV e antigen; HBeAg, HBV e antigen; HBsAb: antibody to hepatitis B surface antigen; AST, aspartate transaminase ; ALT, alanine aminotransferase ; TBIL, total bilirubin; ALB, albumin; GLB, globulin.

Supplementary Table 2 .Univariate and multivariate linear regression analysis of NK cell frequency and antiviral cytokines of NK cells and tis subsets associated with serum pgRNA

	Univariate			Multivariate		
	B	95% CI	P value	B	95% CI	P value
NK	-0.073	-0.114, -0.032	0.001	-0.658	-1.219, -0.096	0.022
NK ^{bright}	2.489	1.617, 3.362	0.000	2.885	1.920, 3.850	0.000
NK ^{dim}	-0.076	-0.118, -0.035	0.000	0.602	0.032, 1.173	0.039
NK_IFN- γ	0.025	0.010, 0.040	0.001	-0.018	-0.114, 0.266	0.895
Nk ^{bright} _IFN- γ	0.025	0.011, 0.039	0.001	0.035	0.020, 0.051	0.000
NK ^{dim} _IFN- γ	0.026	0.009, 0.042	0.002	-0.035	-0.249, 0.102	0.782
NK_TNF- α	-0.002	-0.017, 0.013	0.781	0.030	0.005, 0.055	0.017
Nk ^{bright} _TNF- α	-0.009	-0.027, 0.009	0.328	-0.055	-0.084, -0.026	0.000
NK ^{dim} _TNF- α	0.005	-0.011, 0.021	0.551	-0.09	-0.186, 0.140	0.889

Abbreviations: CI, confidence interval ; pgRNA, pregenomic RNA; IFN- γ ,interferon- γ ; TNF- α ,tumor necrosis factor- α ;

Supplementary Table 3. Univariate and multivariate linear regression analysis of NK cell activating markers associated with serum pgRNA

	Univariate			Multivariate		
	B	95% CI	P value	B	95% CI	P value
NK_NKP30	0.001	-0.002, 0.004	0.550	0.086	-0.004, 0.061	0.164
NK_NKP44	0.090	0.022, 0.157	0.009	1.561	0.705, 2.417	0.000
NK_NKP46	0.005	0.001, 0.008	0.018	0.023	0.008, 0.037	0.002
NK ^{bright} _NKP30	0.001	0.000, 0.001	0.315	0.005	-0.007, 0.002	0.940
NK ^{bright} _NKP44	-0.17	-0.042, 0.008	0.193	-0.045	-0.074, -0.015	0.003
NK ^{bright} _NKP46	-0.001	-0.002, 0.001	0.324	-0.003	-0.005, -0.001	0.000
NK ^{dim} _NKP30	0.00018	-0.003, 0.004	0.924	0.099	-0.059, 0.007	0.103
NK ^{dim} _NKP44	0.001	0.000, 0.001	0.010	-1.425	-2.260, -0.589	0.001
NK ^{dim} _NKP46	0.004	-0.001, 0.008	0.091	-0.021	-0.038, -0.005	0.012

Abbreviations: CI, confidence interval ; pgRNA, pregenomic RNA;

Supplementary Table 4. Univariate and multivariate linear regression analysis of NK cell inhibitory markers associated with serum pgRNA

	Univariate			Multivariate		
	B	95% CI	P value	B	95% CI	P value
NK_NKG2A	0.006	-0.015, 0.027	0.574	0.0136	-0.115, 0.143	0.839
Nk ^{bright} _NKG2A	-0.004	-0.041, 0.032	0.825	0.116	0.045, 0.186	0.001
Nk ^{dim} _NKG2A	-0.001	-0.023, 0.021	0.946	0.001	-0.127, 0.126	0.995
NK_PD1	0.033	0.021, 0.045	0.000	-0.010	-0.027, 0.006	0.212
NK ^{bright} _PD1	0.030	0.018, 0.041	0.000	0.001	0.001, 0.002	0.009
NK ^{dim} _PD1	0.035	0.023, 0.048	0.000	0.009	-0.006, 0.025	0.240
NK_Tim3	-0.008	-0.027, 0.011	0.425	-0.110	-0.330, 0.3025	0.324
NK ^{bright} _Tim3	0.004	-0.015, -0.023	0.690	0.048	0.008, 0.110	0.020
NK ^{dim} _Tim3	-0.007	-0.026, 0.013	0.503	0.056	-0.157, 0.088	0.607
NK_LAIR1	-0.019	-0.035, -0.004	0.016	0.049	-0.299, 0.397	0.782
Nk ^{bright} _LAIR1	-0.032	-0.071, 0.007	0.105	-0.029	-0.076, 0.019	0.236
NK ^{dim} _LAIR1	-0.019	-0.034, -0.004	0.015	-0.058	-0.389, -0.273	0.731

Abbreviations: CI, confidence interval ; pgRNA, pregenomic RNA;