

## Supplementary

**Table S1** Correlations of blood and lung tissue lymphocyte subsets in sarcoidosis patients

	CD38 <sup>+</sup> , total	CD44 <sup>+</sup> , total	CD103 <sup>+</sup> , total	CD38 <sup>+</sup> , %	CD44 <sup>+</sup> , %	CD103 <sup>+</sup> , %	CD38 <sup>+</sup> density, mm <sup>2</sup>	CD44 <sup>+</sup> density, mm <sup>2</sup>	CD103 <sup>+</sup> density, mm <sup>2</sup>	Collagen, %
<b>CD4<sup>+</sup>CD31<sup>+</sup>, %</b>										
r	-0.012	0.393	0.162	-0.004	0.249	0.216	0.078	0.342	0.309	-0.033
P	0.95	0.035	0.403	0.983	0.192	0.259	0.688	0.07	0.102	0.876
<b>CD4<sup>+</sup>CD38<sup>+</sup>, %</b>										
r	-0.297	0.038	-0.113	-0.321	-0.02	0.144	-0.254	0.029	0.207	-0.156
P	0.118	0.846	0.559	0.089	0.919	0.457	0.185	0.88	0.281	0.457
<b>CD4<sup>+</sup>CD44<sup>+</sup>, %</b>										
r	0.144	0.13	0.282	0.127	0.069	0.397	0.201	0.15	0.447	-0.086
P	0.457	0.5	0.139	0.51	0.721	0.033	0.295	0.436	0.015	0.684
<b>CD4<sup>+</sup>CD103<sup>+</sup>, %</b>										
r	0.046	0.057	-0.057	0.108	-0.091	0.11	0.096	0.098	0.083	-0.093
P	0.811	0.77	0.768	0.577	0.638	0.57	0.622	0.613	0.668	0.658
<b>CD8<sup>+</sup>CD31<sup>+</sup>, %</b>										
r	-0.288	0.265	-0.262	-0.235	0.192	-0.335	-0.133	0.287	-0.172	-0.086
P	0.13	0.164	0.169	0.22	0.319	0.075	0.492	0.131	0.371	0.681
<b>CD8<sup>+</sup>CD38<sup>+</sup>, %</b>										
r	-0.045	0.33	-0.02	-0.058	0.029	-0.262	-0.014	0.104	-0.203	-0.065
P	0.817	0.08	0.918	0.766	0.881	0.169	0.942	0.593	0.29	0.759
<b>CD8<sup>+</sup>CD44<sup>+</sup>, %</b>										
r	0.415	0.308	0.347	0.163	-0.157	-0.268	0.116	-0.146	-0.349	-0.026
P	0.025	0.104	0.065	0.398	0.415	0.159	0.549	0.451	0.063	0.902
<b>CD8<sup>+</sup>CD103<sup>+</sup>, %</b>										
r	0.117	0.632	0.206	0.096	0.254	0.035	0.123	0.332	0.033	-0.19
P	0.545	<0.001	0.284	0.621	0.184	0.857	0.524	0.079	0.864	0.363

**Table S2** Correlations (correlation coefficient and p-value) of blood and BALF lymphocyte subpopulation in sarcoidosis patients

	CD4 <sup>+</sup> , %	CD8 <sup>+</sup> , %	CD4 <sup>+</sup> /CD8 <sup>+</sup>	CD4 <sup>+</sup> CD31 <sup>+</sup> , %	CD4 <sup>+</sup> CD38 <sup>+</sup> , %	CD4 <sup>+</sup> CD44 <sup>+</sup> , %	CD4 <sup>+</sup> CD103 <sup>+</sup> , %	CD8 <sup>+</sup> CD31 <sup>+</sup> , %	CD8 <sup>+</sup> CD38 <sup>+</sup> , %	CD8 <sup>+</sup> CD44 <sup>+</sup> , %	CD8 <sup>+</sup> CD103 <sup>+</sup> , %
CD4 <sup>+</sup> , %											
r	0.247	-0.253	0.278	-0.278	0.227	0.17	-0.359	-0.36	-0.019	-0.262	-0.264
P	0.040*	0.034*	0.020*	0.020*	0.059	0.16	0.002**	0.002**	0.875	0.028*	0.027*
CD8 <sup>+</sup> , %											
r	-0.086	0.01	-0.049	-0.11	-0.129	0.123	-0.041	-0.045	0.014	-0.089	-0.062
P	0.479	0.933	0.686	0.363	0.289	0.309	0.736	0.709	0.905	0.462	0.608
CD4 <sup>+</sup> /CD8 <sup>+</sup>											
r	0.21	-0.125	0.175	-0.066	0.157	-0.003	-0.095	-0.139	-0.064	-0.046	-0.062
P	0.081	0.301	0.148	0.59	0.195	0.981	0.434	0.253	0.596	0.703	0.608
CD4 <sup>+</sup> CD31 <sup>+</sup> , %											
r	0.233	-0.276	0.282	0.135	0.487	0.337	-0.3	-0.324	0.057	-0.347	-0.345
P	0.053	0.021*	0.018*	0.266	0.000***	0.004**	0.012*	0.006**	0.638	0.003**	0.003**
CD4 <sup>+</sup> CD38 <sup>+</sup> , %											
r	0.198	-0.238	0.26	-0.033	0.51	0.259	-0.422	-0.315	0.07	-0.283	-0.3
P	0.1	0.047*	0.029*	0.785	0.000***	0.030*	0.000***	0.008**	0.567	0.017*	0.012*
CD4 <sup>+</sup> CD44 <sup>+</sup> , %											
r	0.238	-0.313	0.321	-0.009	0.223	0.362	-0.252	-0.32	-0.052	-0.349	-0.284
P	0.047*	0.008**	0.009**	0.939	0.063	0.002**	0.036*	0.007**	0.672	0.003**	0.017*
CD4 <sup>+</sup> CD103 <sup>+</sup> , %											
r	0.047	0.017	-0.005	0.425	0.231	0.124	0.062	0.016	0.155	-0.071	-0.103
P	0.702	0.889	0.969	0.000***	0.055	0.305	0.612	0.897	0.201	0.558	0.394
CD8 <sup>+</sup> CD31 <sup>+</sup> , %											
r	0.142	-0.136	0.126	0.046	-0.039	0.328	-0.184	-0.161	-0.13	-0.276	-0.27
P	0.241	0.262	0.3	0.708	0.747	0.006**	0.127	0.183	0.285	0.021*	0.024*
CD8 <sup>+</sup> CD38 <sup>+</sup> , %											
r	-0.023	0.055	-0.07	0.243	0.021	0.055	-0.038	0.147	0.032	-0.001	-0.03
P	0.848	0.652	0.567	0.042*	0.864	0.651	0.752	0.223	0.794	0.993	0.803
CD8 <sup>+</sup> CD44 <sup>+</sup> , %											
r	0.032	0.011	-0.018	-0.087	-0.184	0.104	-0.141	0.019	-0.126	-0.025	-0.104
P	0.791	0.929	0.884	0.476	0.127	0.393	0.245	0.877	0.298	0.835	0.393
CD8 <sup>+</sup> CD103 <sup>+</sup> , %											
r	0.058	-0.025	0.018	0.339	0.119	0.237	0.047	-0.09	0.212	-0.157	-0.137
P	0.632	0.839	0.88	0.004**	0.328	0.048*	0.699	0.458	0.317	0.194	0.259

\*P&lt;0.05, \*\*P&lt;0.01, \*\*\*P&lt;0.001.

**Table S3** Correlations (correlation coefficient and p-value) of pulmonary function test indices and lung tissue lymphocyte subsets in sarcoidosis patients

	CD38 <sup>+</sup> , total	CD44 <sup>+</sup> , total	CD103 <sup>+</sup> , total	CD38 <sup>+</sup> , %	CD44 <sup>+</sup> , %	CD103 <sup>+</sup> , %	CD38 <sup>+</sup> density, mm <sup>2</sup>	CD44 <sup>+</sup> density, mm <sup>2</sup>	CD103 <sup>+</sup> density, mm <sup>2</sup>	Collagen, %
FVC, % pred										
r	-0.2	-0.406	-0.459	-0.174	-0.275	-0.306	-0.18	-0.326	-0.315	-0.026
P	0.338	0.044*	0.021*	0.406	0.183	0.136	0.39	0.111	0.125	0.884
FEV <sub>1</sub> , % pred										
r	-0.247	-0.177	-0.418	-0.31	-0.194	-0.347	-0.323	-0.209	-0.381	-0.055
P	0.234	0.398	0.038*	0.131	0.352	0.089	0.115	0.317	0.06	0.754
FEV <sub>1</sub> /FVC, %										
r	0.047	0.433	0.014	-0.15	0.154	-0.14	-0.148	0.258	-0.166	-0.013
P	0.824	0.030*	0.949	0.475	0.461	0.504	0.479	0.213	0.427	0.942
TLC, % pred										
r	-0.356	-0.503	-0.415	-0.327	-0.322	-0.162	-0.296	-0.357	-0.141	-0.015
P	0.08	0.011*	0.039*	0.11	0.117	0.438	0.151	0.08	0.502	0.933
VC, % pred										
r	-0.161	-0.406	-0.481	-0.137	-0.289	-0.351	-0.145	-0.337	-0.355	-0.057
P	0.441	0.044*	0.015*	0.515	0.16	0.085	0.476	0.099	0.082	0.745
RV, % pred										
r	-0.349	-0.271	0.076	-0.275	0.015	0.307	-0.047	-0.212	0.288	0.025
P	0.087	0.191	0.717	0.184	0.943	0.136	0.822	0.31	0.162	0.885
DLCO, % pred										
r	-0.382	-0.229	-0.24	-0.476	-0.414	-0.296	-0.447	-0.238	-0.408	-0.268
P	0.06	0.27	0.248	0.016*	0.040*	0.151	0.025*	0.251	0.048*	0.12

FVC, forced vital capacity; pred, predicted; FEV<sub>1</sub>, forced expiratory volume in one second; TLC, total lung capacity; VC, vital capacity; RV, residual capacity; DLCO, diffusing capacity of carbon monoxide. \*P<0.05, \*\*P<0.01, \*\*\*P<0.001.

### Control tissues:

CD4: [http://aperio.vpc.lt/imageserver/scan2\2016-09-26\kontrole\\_CD4\\_20x.svs/view.apml](http://aperio.vpc.lt/imageserver/scan2\2016-09-26\kontrole_CD4_20x.svs/view.apml)

CD8: [http://aperio.vpc.lt/imageserver/scan2\2016-09-26\kontrole\\_CD8\\_20x.svs/view.apml](http://aperio.vpc.lt/imageserver/scan2\2016-09-26\kontrole_CD8_20x.svs/view.apml)

CD103: [http://aperio.vpc.lt/imageserver/scan2\2016-09-26\kontrole\\_CD103\\_20x.svs/view.apml](http://aperio.vpc.lt/imageserver/scan2\2016-09-26\kontrole_CD103_20x.svs/view.apml)

CD38: [http://aperio.vpc.lt/imageserver/scan2\2016-09-26\kontrole\\_CD38\\_20x.svs/view.apml](http://aperio.vpc.lt/imageserver/scan2\2016-09-26\kontrole_CD38_20x.svs/view.apml)

CD44: [http://aperio.vpc.lt/imageserver/scan2\2016-09-26\kontrole\\_CD44\\_20x.svs/view.apml](http://aperio.vpc.lt/imageserver/scan2\2016-09-26\kontrole_CD44_20x.svs/view.apml)