

Supporting Information

Systematic Evaluation of the Use of Human Plasma and Serum for Mass-Spectrometry-Based Shotgun Proteomics

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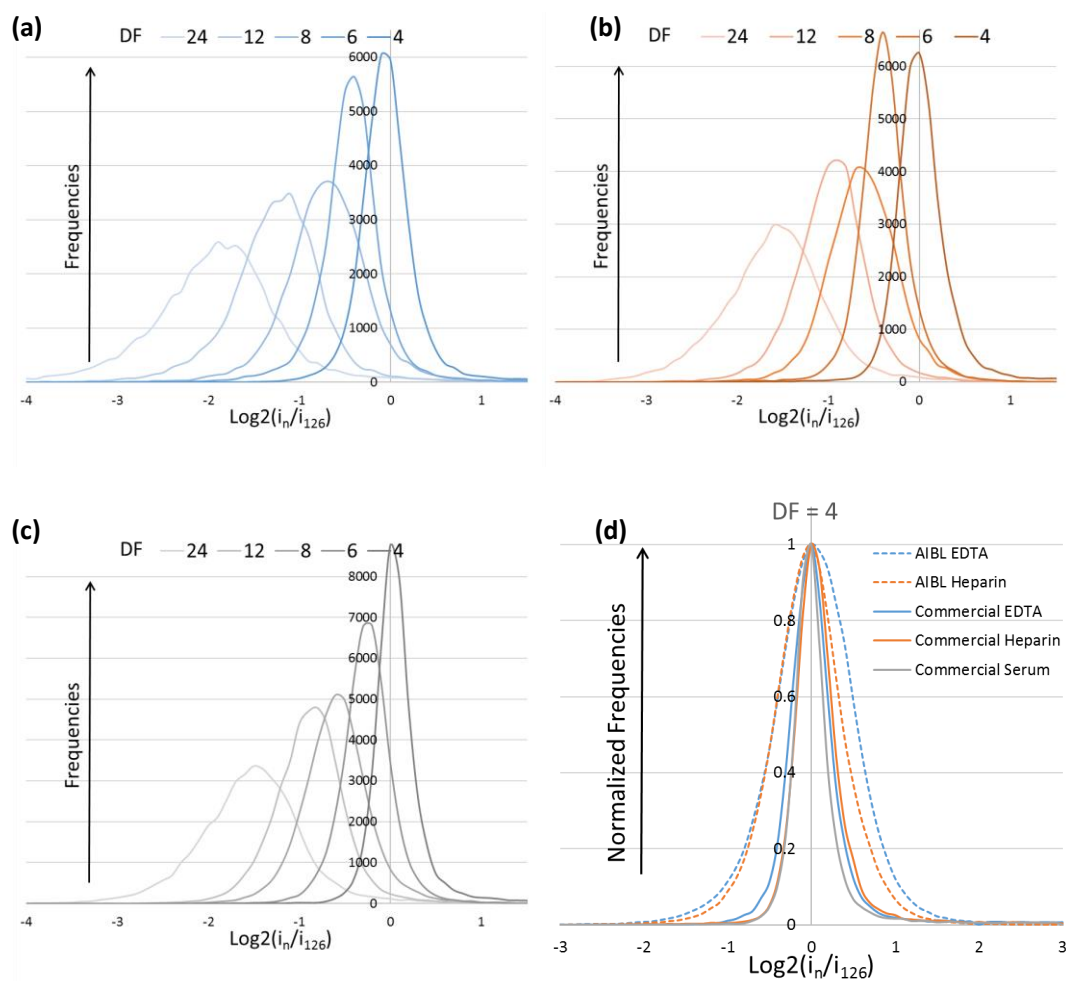


Figure S1. $\text{Log2}(i_n/i_{126})$ distribution of matched raw spectral data according to DF in (a) commercial EDTA-plasma, (b) commercial heparin-plasma, and (c) commercial serum samples. In (d), normalized distributions of matched raw spectral data (DF = 4) were compared between commercial samples and AIBL samples.

Table S1. Descriptive statistics of datasets: commercial EDTA-plasma with different DFs, commercial heparin-plasma with different DFs, commercial serum with different DFs, AIBL EDTA-plasma and AIBL heparin-plasma.

DF	Expected ratio fold change	Expected log2 ratio fold change	Median of log2 ratio fold change	Mean of log2 ratio fold change	SD of log2 ratio fold change	Lower 95% CI of mean	Upper 95% CI of mean	Kurtosis
Commercial EDTA-plasma								
4	1	0	-0.0979	-0.0241	0.1949	-0.4062	0.3579	13.2962
6	0.6667	-0.5850	-0.4740	-0.4731	0.2009	-0.8668	-0.0794	11.9852
8	0.5	-1	-0.7438	-0.7488	0.2480	-1.2348	-0.2628	5.7295
12	0.3333	-1.5850	-1.2798	-1.2973	0.2500	-1.7873	-0.8074	5.1107
24	0.1667	-2.5850	-1.9409	-1.9428	0.2735	-2.4789	-1.4068	2.7875
Commercial heparin-plasma								
4	1	0	-0.0436	0.0370	0.1917	-0.3387	0.4126	14.1191
6	0.6667	-0.5850	-0.4448	-0.4373	0.1848	-0.7995	-0.0750	14.3648
8	0.5	-1	-0.6674	-0.6612	0.2399	-1.1315	-0.1910	6.5827
12	0.3333	-1.5850	-1.0056	-0.9986	0.2312	-1.4518	-0.5455	7.4635
24	0.1667	-2.5850	-1.6249	-1.6372	0.2609	-2.1485	-1.1258	3.7380
Commercial serum								
4	1	0	-0.1023	-0.0118	0.1700	-0.3450	0.3214	19.1040
6	0.6667	-0.5850	-0.4068	-0.4067	0.1989	-0.7966	-0.0168	12.9393
8	0.5	-1	-0.7451	-0.7365	0.2228	-1.1732	-0.2998	8.1943
12	0.3333	-1.5850	-1.0304	-1.0383	0.2322	-1.4936	-0.5831	7.4145
24	0.1667	-2.5850	-1.6656	-1.6752	0.2621	-2.1890	-1.1614	3.8048
AIBL EDTA-plasma								
4	1	0	-0.1161	-0.1287	0.3069	-0.7303	0.4729	1.1943
AIBL heparin-plasma								
4	1	0	-0.0827	-0.0871	0.2857	-0.6472	0.4729	2.1827

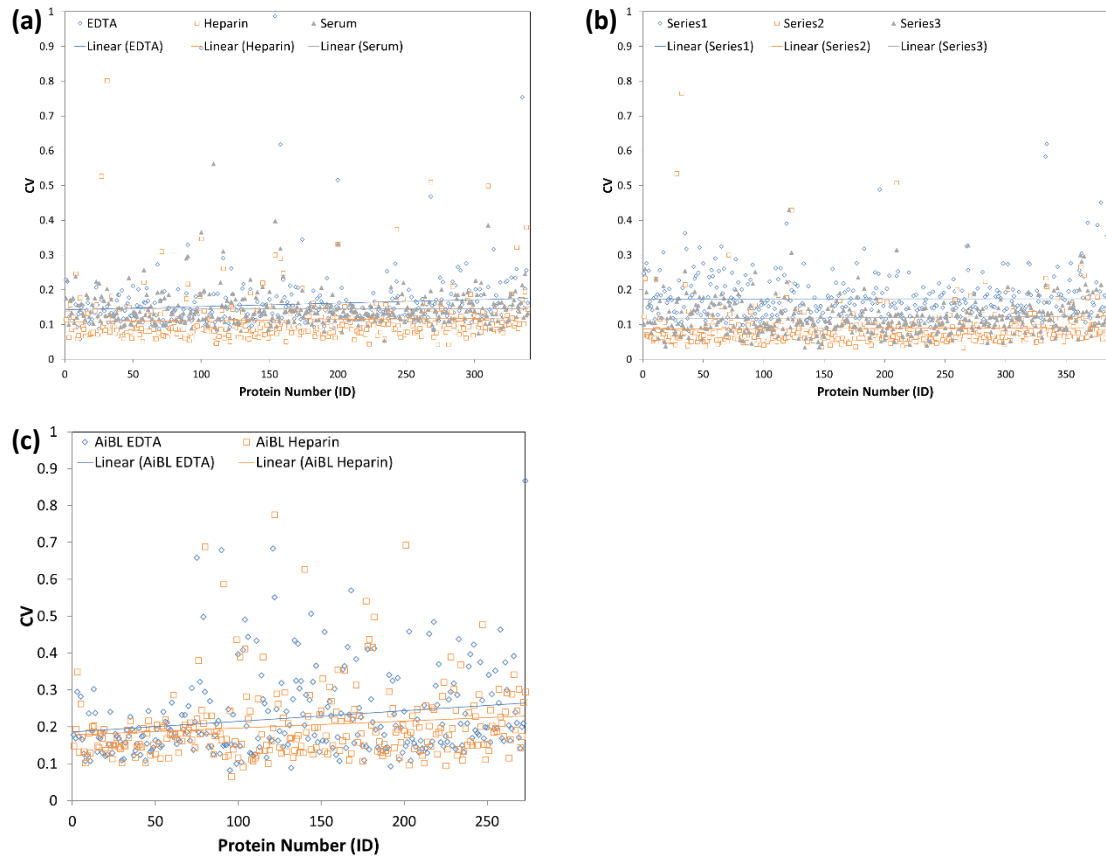


Figure S2. CV values per protein across sample types in the (a) interday dataset, (b) intraday dataset, and (c) AIBL dataset.

Table S2. Median CVs of protein abundance in interday and intraday repeatability study.

	EDTA-plasma	Heparin-plasma	Serum
Interday CV	14.1%	9.5%	13.4%
Intraday CV	16.0%	7.3%	11.0%

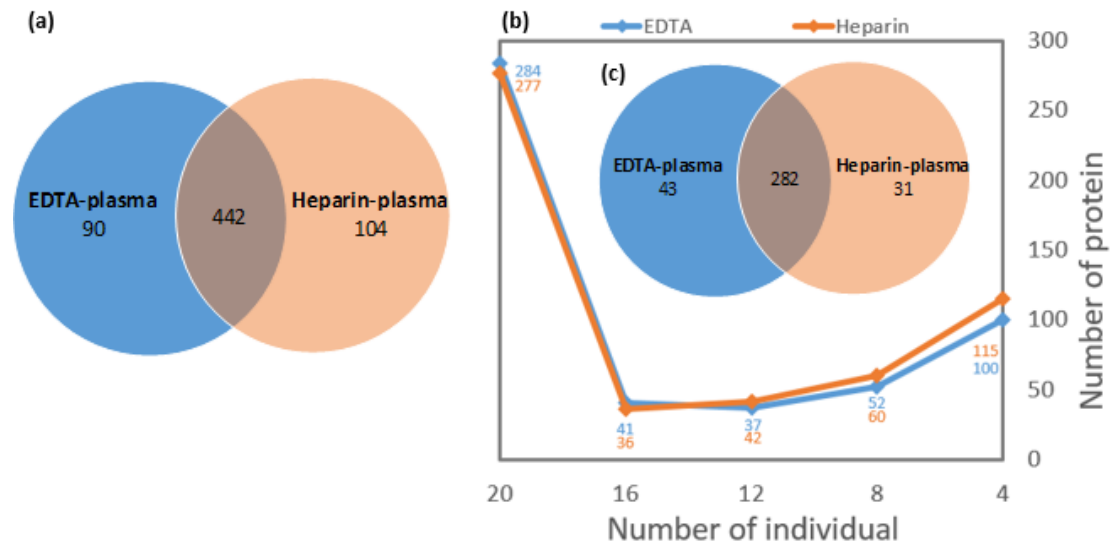


Figure S3. (a) Proteome coverage obtained in AIBL EDTA-plasma and heparin-plasma samples. (b) Reproducibility of IDs among 20 individuals. Proteins which were identified in more than 16 individuals were considered as consistent IDs. (c) Proteome coverage overlap between the consistent IDs in EDTA-plasma and heparin-plasma.

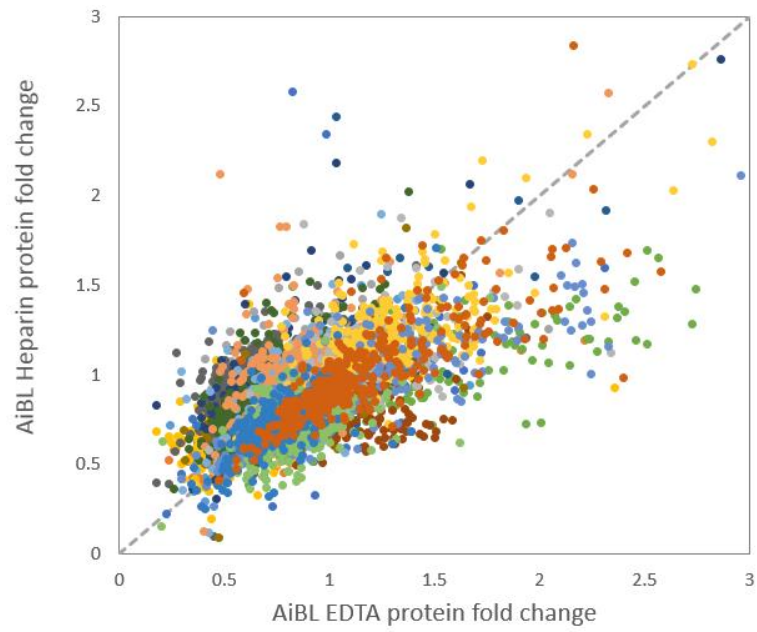


Figure S4. Scatter plot of the protein fold-change ratios measured in EDTA-plasma and heparin-plasma samples from AIBL. Each color represents an individual (i.e., $n = 20$), and each point represents given protein measured in the different sample types (i.e., EDTA-plasma versus heparin-plasma).