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SHORT COMMUNICATION

High Resolution Continuous Elution Electrophoresis for the Evaluation of Low Abundance Serum Proteins

Jakob Triebel, Hülya Markl-Hahn, David Harris, Thomas Bertsch

Institute for Clinical Chemistry, Laboratory Medicine and Transfusion Medicine, Nuremberg General Hospital & Paracelsus Medical University, Nuremberg, Germany

SUMMARY

Background: **The evaluation of low abundance biomarkers in the circulating low molecular weight serum proteome is an important source of information. Techniques for sample preparation to remove high abundant proteins and to enrich the low molecular weight fraction are usually required prior to novel biomarker detection.**
Methods: **A continuous elution electrophoresis was used to separate the low molecular weight serum proteins from the high abundance serum proteins, such as albumin and immunoglobulins. Centrifugal concentration, SDS-PAGE, and total protein staining were performed to analyze eluted protein fractions.**
Results: **Consecutive concentrated serum protein fractions demonstrate separation at a high resolution of 1 - 2 kDa below 20 kDa.**
Conclusions: **Continuous elution electrophoresis is an adequate method to eliminate high abundance proteins which interfere with the detection of low abundance biomarkers in the low molecular weight proteome and to enrich its proteins for subsequent detection and clinical evaluation.**
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Correspondence:
Jakob Triebel, MD
Institute for Clinical Chemistry
Laboratory Medicine and Transfusion Medicine
Nuremberg General Hospital &
Paracelsus Medical University
Prof.-Ernst-Nathan-Str. 1
90419 Nuremberg
Germany
Phone: +49 911 398 2454
Fax: +49 911 398 2710
Email: Jakob.Triebel@gmx.de

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Supplementary Figure

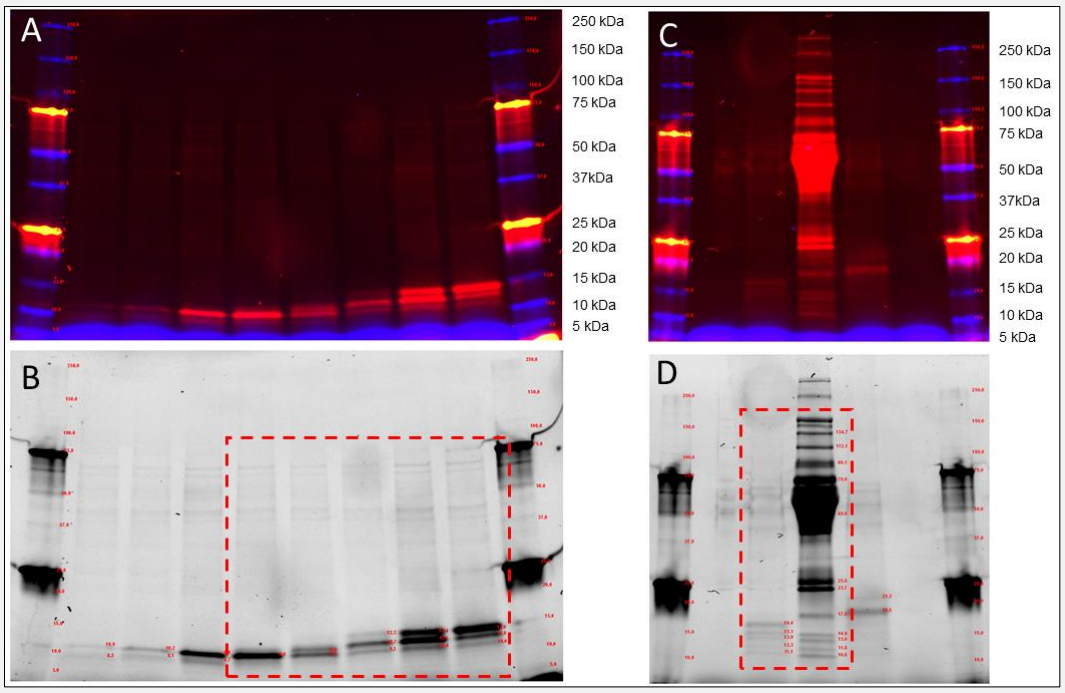

Figure S1. A: whole gel multichannel image (total protein = red, Cy3 = green, Alexa 647 = blue) of gel corresponding to Figure 2 A, showing the molecular weight markers left and right. B: whole gel single channel image (total protein, UV transillumination), the red line indicates the area shown in Figure 2 A. C: whole gel multichannel image with molecular weight markers corresponding to Figure 2 B. D: whole gel single channel image, the red line indicates the area shown in Figure 2 B.