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Are Proteins Found in EBC?

Yes, indeed proteins are found in EBC. Remember, EBC consists in part of aerosolized particles of airway lining fluid. Most of these particles are tiny (<1 micron), but are of course thousands of times larger than the largest proteins. Any molecule that is found in the airway lining fluid we believe can be found in EBC, if the assay is good enough. And that is a key issue. How good is the assay?

Total proteins have been found in EBC at levels in the low microgram/ml range. We have found proteins larger than 80 kD in EBC. When run on standard silver-stained 2D gels, several protein spots are readily visible if starting with a large volume of EBC. Using higher sensitivity 2D gels, we fully anticipate finding hundreds of protein spots with starting protein quantities of 500 nanograms. These higher sensitivity gel technologies are currently under investigation in our laboratories.

There are several studies reporting pg/ml levels of various cytokines in EBC. Please see our short paper "STUDYING CYTOKINES IN EBC" for a discussion of potential pitfalls of cytokine ELISAs for EBC assay.