

Book chapters – protocols – methodological publications AUC –SEC-MALS platforms– related SANS (IBS-ISBG)

Fev 2023

- Saleun S, Mas C, Le Roy A, Penaud-Budloo M, Adjali O, Blouin V, Ebel C.
Analytical Ultracentrifugation Sedimentation Velocity for the Characterization of Recombinant Adeno-Associated Virus Vectors Sub-Populations
Eur Biophys. J. this manuscript is under minor revision.
- Ebel C, Birck C.
Sedimentation Velocity Methods for the Characterization of Protein Heterogeneity and Protein Affinity Interactions.
(2021) *Methods Mol Biol.* 2247:155-171. doi: 10.1007/978-1-0716-1126-5_9.
- Ebel C, Breyton C, Martel A.
Examining Membrane Proteins by Neutron Scattering.
(2020) *Methods Mol Biol.* 2168:147-175. doi: 10.1007/978-1-0716-0724-4_7. PMID: 33582991.
- Ebel C.
AUC in the High Concentration of Salts/Cosolvent.
(2016). In: Uchiyama S, Arisaka F, Stafford FW, Laue T (eds) *Analytical Ultracentrifugation: Instrumentation, Software, and Applications*. Springer Japan, Tokyo, pp 355-73. doi:10.1007/978-4-431-55985-6_17.
- Le Roy A., Wang K., Schaack B., Schuck P., Breyton C., Ebel C.
AUC and Small-Angle Scattering for Membrane Proteins.
(2015) *Methods in Enzymology* **562**:257-86.
doi:10.1016/bs.mie.2015.06.010
- Zhao H., Ghirlando R., ..., Ebel C., ..., Le Roy A., ..., Schuck P.
A Multilaboratory Comparison of Calibration Accuracy and the Performance of External References in Analytical Ultracentrifugation.
(2015) *PloS one* **10** (5):e0126420. doi:10.1371/journal.pone.0126420.
- Le Roy A., Breyton C., Ebel C.
Analytical Ultracentrifugation and size exclusion chromatography coupled to light scattering for the characterization of membrane proteins in solution.
(2014) in *Membrane Proteins Production for Structural Analysis*, edited by Mus-Vetetou I, Springer pp 267-88. doi 10.1007/978-1-4939-0662-8_10.
- Breyton C., Gabel F., M. Lethier M., Flayhan A., Durand G., Jault J.M., Juillan-Binard C., Imbert L., Moulin M., Ravaud S., Hartlein M., Ebel C.
Small angle neutron scattering for the study of solubilised membrane proteins.
(2013) *Eur. Phys. J. E Soft Matter*, **36**(7): 71.
- Le Roy A., Nury H., Wiseman B., Sarwan J., Jault J.-M., Ebel C.
Sedimentation velocity analytical ultracentrifugation in hydrogenated and deuterated solvents for the characterization of membrane proteins.
(2013) **1033**: p. 219-51 in *Membrane Biogenesis, Methods in Biology*, Springer, New-York.
- Salvay A. G., Communie G., Ebel C.
Sedimentation Velocity Analytical Ultracentrifugation for Intrinsically Disordered Proteins.
(2012) in *Intrinsically Disordered Protein Analysis Volume 2, Methods and Experimental Tools*, pp 91-104, Springer, New-York.
- Brown P. H., Balbo A., Zhao H., Ebel C. Schuck P.
Density contrast sedimentation velocity for the determination of protein partial-specific volumes.
(2011) *PloS one* **6**, e26221.
- Ebel C.
Sedimentation velocity to characterize surfactants and solubilized membrane proteins.
(2011) *Methods* **54**: 56–66

- Manon F., Ebel C.
Analytical ultracentrifugation, a useful tool to probe intrinsically disordered proteins
(2010) In : *Instrumental Analysis of Intrinsically Disordered Proteins: Assessing Structure and Conformation*, Chap. 15, Uversky V.N. and Longhi S. eds., John Wiley and Sons (Hoboken, New Jersey).
- le Maire M., Arnou B., Olesen C., Georgan D., Ebel C., Møller J. V.
Detergent binding and structural characterization of membrane proteins by gel chromatography and analytical ultracentrifugation : the example of the sarcoplasmic reticulum Ca²⁺-ATPase.
(2008) *Nat Protoc.* 3(11):1782-95.
- Ebel C.
Solvent mediated protein-protein interactions.
(2007) In : *Protein Reviews*, Z. Atassi, Ed., vol. 5 *Protein Interactions – Biophysical Approaches for the study of Complex Reversible System*, Chapter 5, pp 255-287, P. Schuck Ed., Springer.
- Ebel C.
Analytical ultracentrifugation. State of the art and perspectives.
(2007) In : *Protein Structures : Methods in Protein Structure and Stability Analysis*, Chapter 22, pp 229-260, Nova Science Publishers, Inc. NY.
- Ebel C., Møller J.V., le Maire M.
Analytical ultracentrifugation : membrane protein assemblies in the presence of detergent.
(2007) In : *Biophysical approaches of structure and functions of membrane proteins*, Chapter 4, pp 91-120, Eva Pebay-Peyroula Eds, Wiley.
- Salvay A., Santa Maria M., le Maire M., Ebel C.
Analytical Ultracentrifugation Sedimentation Velocity for the Characterization of Detergent-Solubilized Membrane Proteins Ca⁺⁺-ATPase and ExbB.
(2007) *J. Biol. Phys.* 33, 399-419.
- Perez Sanchez H., Tatarenko K., Nigen M., Pavlov G., Imbert A., Lortat-Jacob H., Garcia de la Torre G., Ebel C.
Organisation of Human Interferon gamma -heparin complexes from solution properties and hydrodynamics.
(2006) *Biochemistry* 45, 13227-38.
- Salvay A., Ebel C.,
Analytical ultracentrifuge for the characterization of detergent in solution.
(2006) *Progress. Colloid & Polymer Science* 131, 74-82.
- Winstone T.L., Jidenko M., le Maire M., Ebel C., Duncalf K.A., Turner R.J.
Organic Solvent Extracted EmrE Solubilized in Dodecyl Maltoside is Monomeric and Binds Drug Ligand.
(2005) *Biochem. Biophys. Res. Commun.* 32 437-45.
- Ebel, C.
Analytical Ultracentrifugation for the Study of Biological Macromolecules.
(2004) *Progress. Colloid & Polymer Science*, 127 73-82.
- Gohon Y., Pavlov G., Timmins P., Tribet C., Popot J.-L., Ebel C.
Partial specific volume and solvent interactions of amphipol A8-35.
(2004) *Anal. Biochem.* 334 318–334.
- Pavlov G., Finet S., Tatarenko K., Korneeva E., Ebel C.
Conformation of heparin studied with macromolecular hydrodynamics methods and X-Rays scattering.
(2003) *Eur. Biophys. J.* 32 437-49.
- Solovyova A., Schuck P., Costenaro L., Ebel C.
Non-ideality by sedimentation velocity of halophilic malate dehydrogenase in complex solvents.
(2001) *Biophys. J.* 81 1868-80.