

Video Article

Preparation of Artificial Bilayers for Electrophysiology Experiments

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Abstract

Planar lipid bilayers, also called artificial lipid bilayers, allow you to study ion-conducting channels in a well-defined environment. These bilayers can be used for many different studies, such as the characterization of membrane-active peptides, the reconstitution of ion channels or investigations on how changes in lipid bilayer properties alter the function of bilayer-spanning channels. Here, we show how to form a planar bilayer and how to isolate small patches from the bilayer, and in a second video will also demonstrate a procedure for using gramicidin channels to determine changes in lipid bilayer elastic properties. We also demonstrate the individual steps needed to prepare the bilayer chamber, the electrodes and how to test that the bilayer is suitable for single-channel measurements.

Video Link

The video component of this article can be found at <https://www.jove.com/video/1033/>

Protocol

Please visit [Springer Protocols](#) for more information about preparing artificial bilayers and using gramicidin channels for probing membrane elasticity.

Disclosures

The authors have nothing to disclose.