

xCELLigence Real-Time Cell Analysis

E-Plate coating user guide

Adherent cells attach to and grow on Agilent E-Plates in a manner similar to standard tissue culture plates. Precoating E-Plates with poly-L-lysine or extracellular matrix proteins is generally not required. For cases where precoating is required, these instructions serve as a general guideline. The optimal coating protein and concentration may vary from one cell line to the next. If you have already optimized coating instructions for your cell line of interest using standard tissue culture plates, it will likely be transferable to E-Plates and we recommend using this as a starting point.

Recommended coating volume

Device	Volume (for Each Well)
E-Plate L8	150 μ L
E-Plate 16	50 μ L
E-Plate 96	50 μ L
E-Plate 384	25 μ L
E-Plate Cardio 96	50 μ L
E-Plate CardioECR 48	50 μ L
E-Plate Insert	30 μ L

Recommended final coating concentrations

Extracellular Matrix (ECM) Protein	Concentration
Collagen IV	10 μ g/mL
Collagen I	10 μ g/mL
Fibronectin	10 μ g/mL
Laminin	>10 μ g/mL
Poly-L-lysine	10 μ g/mL
Vitronectin	10 to 15 μ g/mL
Bovine serum albumin (negative control)	0.5% w/v

Instructions

1. Dilute protein stock in 1x PBS to the desired final concentration (for example, 10 µg/mL).
2. Coat the E-Plate well with the desired volume (for example, 50 µL).
Ensure that the entire bottom surface of the well is covered with the solution.
3. With the plate lid firmly in place, incubate at 37 °C for 1 to 3 hours, or at 4 °C overnight depending on the protein used. Example: for vitronectin, incubate overnight.
4. Remove the coating solution completely and wash twice with 1x PBS. (Wash with water for poly-L-lysine coating). For E-Plates (PET and glass bottom), exercise caution when using a pipette to remove the solution from the bottom of the wells. Apply minimal pressure when placing the pipette tip against the well bottom. Be careful when washing the Agilent E-Plate Insert device. Do not touch the membrane with the pipette tip, as this may compromise the integrity of the membrane.
5. Use the coated plate immediately. In some cases, coated plates may be stored (with the plate lid firmly in place to ensure sterility) at 4 °C for up to one week before use. The storage time may affect the status of the protein coat (extent of hydration, oxidation), which may then influence cell adhesion and growth. Careful attention should be paid to the details of plate coating and the timing of plate storage/use to ensure reproducibility.