

## iMatrix-221

Code No. 892 061, 892 062

ver. 001

**Product Information:** iMatrix-221 is a recombinant human laminin-221 E8 fragment expressed by CHO-S cell (Thermo Fisher Scientific). Laminin-221 is abundant in basement membranes surrounding cardiac and skeletal muscle cells, and binds to the cell membrane receptor integrin  $\alpha 7 X 2 \beta 1$ .

**Content:** Recombinant human laminin-221 E8 fragment

**Amount:** 175  $\mu\text{g}$ /tube, six tubes

**Concentration:** 0.5 mg/mL

**Form:** Liquid solution (solvent: PBS (-))

**Storage and Stability:** The iMatrix-221 is stable at +2 to +15°C at least until the expiration date printed on the label. Protect from light. Avoid freeze-thaw cycles.

**Activity:** The dissociation constant of iMatrix-221 with integrin  $\alpha 7 X 2 \beta 1$  is 10 nM or less.

**Application:** iMatrix-221 can be used as cell culture substrate for various cell types including ES/iPS cells.

### Procedure

- 1) Briefly spin down.
- 2) Dilute the iMatrix-221 solution with sterile PBS (-). The concentration of 0.5  $\mu\text{g}/\text{cm}^2$  is recommended. The optimum coating concentration is dependent on cells. Please

adjust the concentration.

- 3) For example, for one well of a 6-well plate (9.6  $\text{cm}^2/\text{well}$ ; 0.5  $\mu\text{g}/\text{cm}^2$ ), add 9.6  $\mu\text{L}$  of iMatrix-221 solution (4.8  $\mu\text{g}$  of protein) in 1.99 mL of PBS (-).
- 4) Add 2 mL of the diluted iMatrix-221 solution to the well.
- 5) Incubate either at 37°C for 1 h, at room temperature for 3 h, or at 4°C overnight.
- 6) Remove excess solution from the coated surface.
- 7) Immediately plate cells at desired density. No rinsing is required before cell seeding. \*Don't dry up the coated dishes.

\*\*Problems with cell attachment can be avoided by the following additional procedure. Before Step 6, add 1.5 mL/well of PBS (-) or medium containing albumin (0.5 mg/mL) to the wells. Then, without incubation, proceed to Step 6.

### References

- Nishiuchi R. et al., *Matrix Biol.*, **25**: 189-97, 2006
- Taniguchi Y. et al., *J. Biol. Chem.* **284**: 7820-31, 2009
- Israeli-Rosenberg S. et al., *Circ. Res.*, **114**: 572-586, 2014

**Regulatory Disclaimer:** This product is not intended to diagnose, treat, cure, or prevent any diseases.

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