Corning® rLaminin-521 (human) Frequently Asked Questions

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Q: How is Corning rLaminin-521 (human) produced?

A: Corning rLaminin-521 (human) is a recombinant protein expressed in a mammalian cell line.

Q: When using rLaminin-521 (human) for single cell culture, do I need to add an apoptosis inhibitor for cell seeding?

A: No rho-kinase (ROCK) inhibitor or blebbistatin treatment is needed.

Q: Does rLaminin-521 (human) support long-term hPSC culture?

A: Human ESC lines and iPSC lines have been cultured for multiple passages on rLaminin-521 (human) (Rodin, et al., Nature Communications, 2014).

Q: Does rLaminin-521 (human) support the derivation of iPSC lines?

A: Human iPSC lines have been successfully derived on rLaminin-521 (human) (Lu, et al., Biomaterials, 2014).

Q: What hPSC lines have been cultured on rLaminin-521 (human)?

A: Several human ESC lines and human iPSC lines have been successfully expanded on rLaminin-521 (human) (Rodin, et al., 2014 Nature Communications; Lu, et al., Biomaterials, 2014).

Q: Does rLaminin-521 (human) support xeno-free hPSC culture?

A: rLaminin-521 (human) is compatible with commercially available xeno-free media formulations and recombinant dissociation enzymes, such as TrypLE™ by Life Technologies.

Q: What hPSC culture media can be used with rLaminin-521 (human)?

A: A variety of commercially available media have been successfully tested, including Stemgent NutriStem™, Stem Cell Technologies mTeSR™1 and TeSR™2, and Life Technologies Essential-8™.

Q: How do you thaw rLaminin-521 (human)?

A: Slowly thaw rLaminin-521 (human) at 4°C before use.

Q: What is the shelf-life of rLaminin-521 (human) after thawing?

A: rLaminin-521 (human) can be stored at 2°C to 8°C for 3 to 4 weeks after thawing. For longer storage, make aliquots (to avoid repeated freezing and thawing) and store at -20°C.

Q: What is the recommended cell seeding density on rLaminin-521 (human)?

A: A cell seeding density of 50,000 cells/cm^2 is recommended, but cell seeding density should be —optimized for different hPSC lines and media.

Q: How long does it take for cells to be ready for passaging?

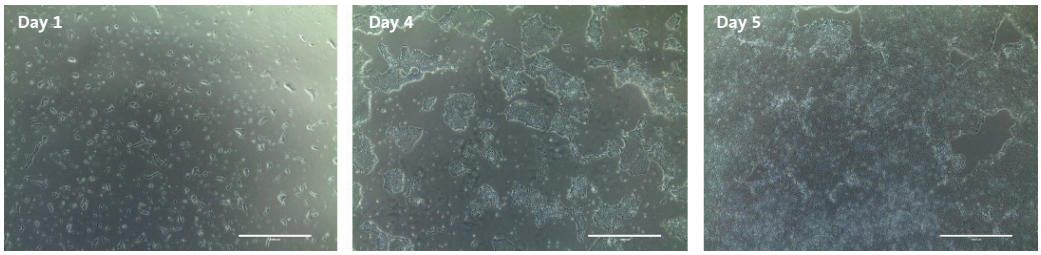
A: With optimal media conditions and seeding density, most cell lines will be ready for passaging in 4 to 8 days (~80% confluence). Passaging time will vary based on the hPSC line.

Q: Can hPSCs previously cultured on other substrates, such as Corning Matrigel® matrix or feeder layers, be cultured on rLaminin-521 (human)?

A: Yes, you can perform single-cell passage on rLaminin-521 (human).

Q: Is the morphology of hPSCs passaged as a single cell suspension different than clump culture?

A: Single cells initially form small clumps that continue to grow (see images).



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