



Product Details

Laminin 511 E8 (LN511-E8) is a recombinant human protein that provides a defined surface for in vitro feeder-free culture of multiple human pluripotent stem cells (PSCs). Being a truncated form of laminin 511, LN511-E8 serves as a functionally minimal form that retain the full capability for binding to integrins. LN511-E8 has been proven to maintain normal growth characteristics and stemness in multiple PSC lines without simultaneous differentiation, which includes ESC, iPSC, MSC etc. In addition, LN511-E8 has been demonstrated to support PSC growth for >10 passages without any signs of karyotypic abnormalities and to maintain the ability of PSCs to differentiate into all three germ line lineages. As published by Takamichi Miyazaki et al. , the LN511-E8 variant of laminin 511 shows higher efficiency for supporting the adhesion of dissociated cells than did wild-type laminin 511 which makes a cost-effective choice.

Optimized and defined surface

Laminin 511 E8 (LN511-E8) has been proved to allow single-cell seeding at low density. In a feeder-free culture system, the seeded cells demonstrate high motility with higher clonal survival.

Physiology-related

The laminin 511 isoform is crucial to the growth and maintenance of hPSCs in human through its binding to cell receptors $\alpha 6\beta 1$ integrin. LN511-E8 is truncated laminin 511 isoform which works in multiple stem cell lines, from iPSC to hESC and MSC.

Better Adhesion

LN511-E8 variant of laminin 511 shows higher efficiency for supporting the adhesion of dissociated cells than did wild-type laminin 511.

Cost Effective

LN511-E8 maintains pluripotency at a lower dose without simultaneous differentiation when compared to laminin 521. Hence LN511-E8 provides a cost-effective option for feeder free culture of human pluripotent stem cells (PSCs).

Reduce Variability

LN511-E8 is a defined, recombinant human protein with better lot-to-lot consistency that reduces variability in your PSC cultures.

Key parameter

Purity (SDS PAGE)	> 95%
Mycoplasma Test	Negative
Sterility Test	Negative
Integrin Binding Assay	≤ 10 nM
Endotoxin Test	< 0.01 EU per μ g

Reconstitution

Please see Certificate of Analysis for specific instructions.

For best performance, we strongly recommend you to follow the reconstitution protocol provided in the CoA.

Formulation

Lyophilized from 0.22 μ m filtered solution in PBS, pH7.4 with trehalose as protectant.

Contact us for customized product form or formulation.

Storage

For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

- -20°C to -70°C for 24 months in lyophilized state;
- -70°C for 12 months under sterile conditions after reconstitution;
- $2-8^{\circ}\text{C}$ for 3 months under sterile conditions after reconstitution.

Bioactivity-Stem Cell Culture

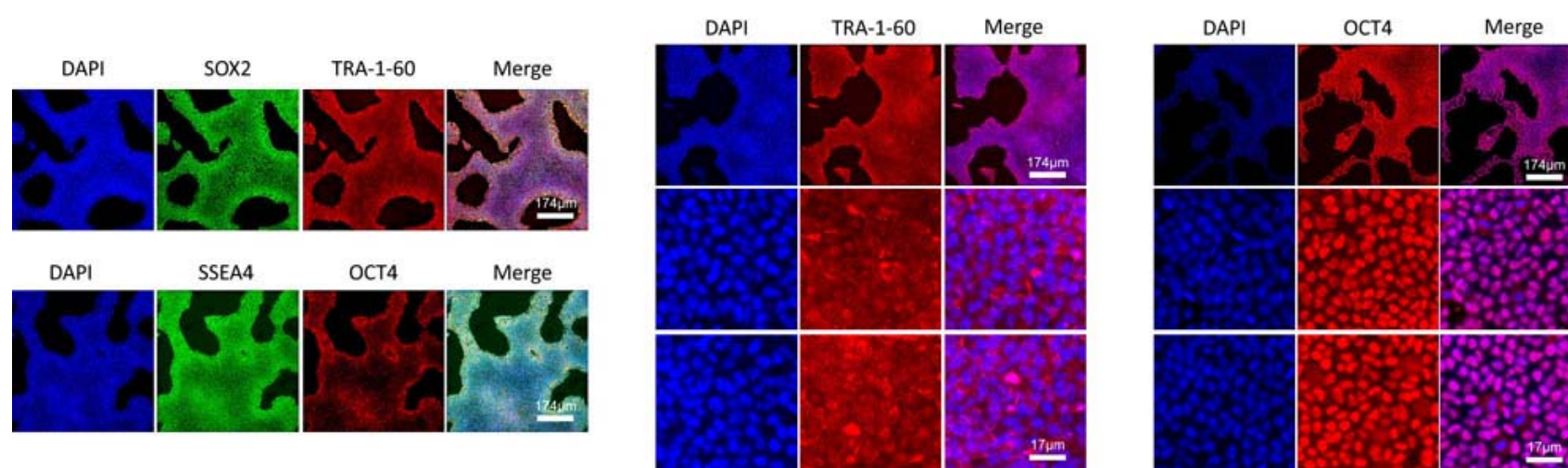
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and more!

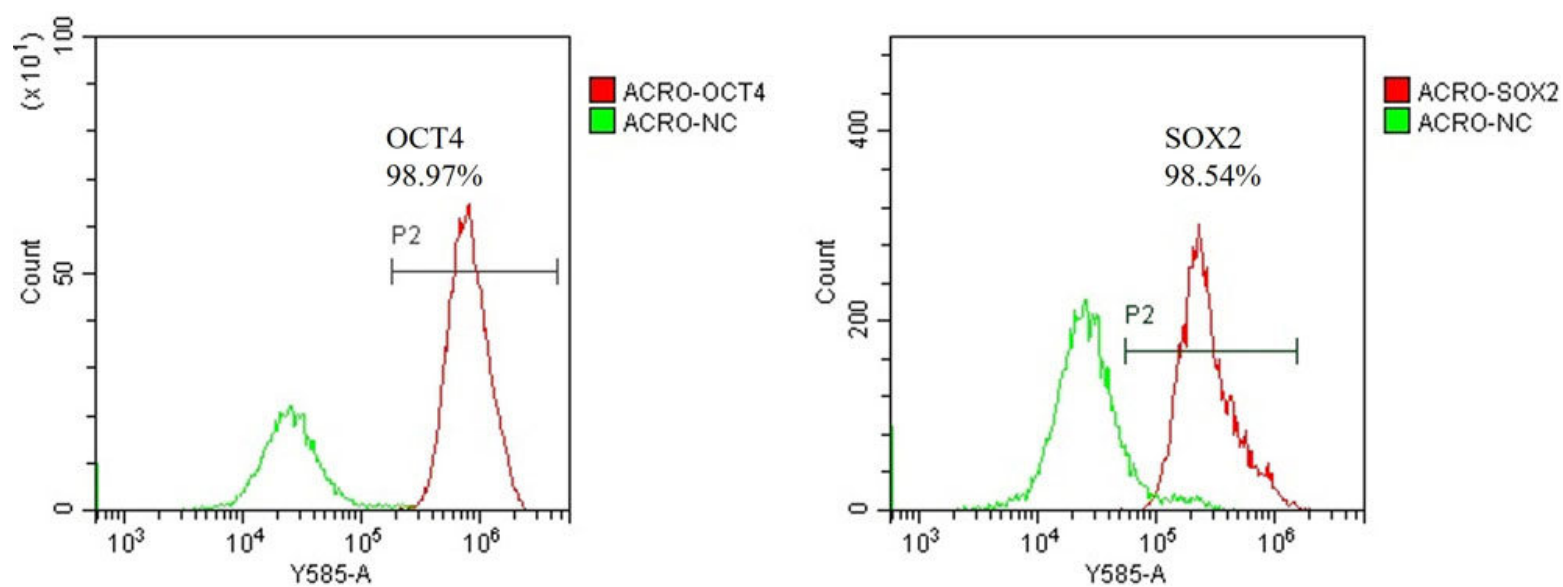


Human Laminin 511 Protein, premium grade

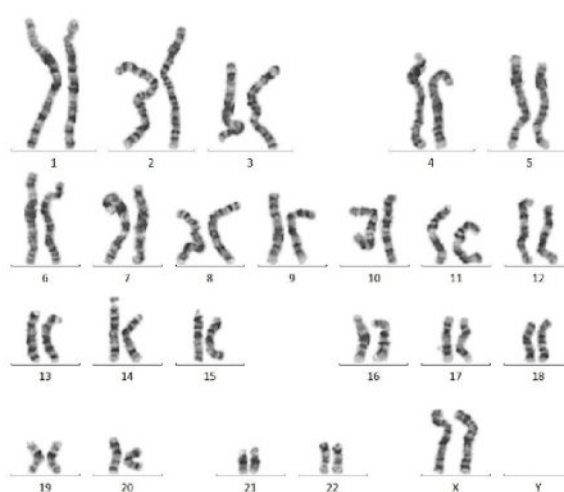
Catalog # LA8-H5283



Laminin 511 (LA8-H5283) could maintain the stemness of iPSC at least Passage 5. Immunofluorescent staining indicated that the iPSCs expressed high levels of pluripotency associated markers Sox2, TRA-1-60, SSEA4 and OCT4.



Laminin 511 (LA8-H5283) could maintain the stemness of iPSC at least Passage 5. FACS data indicated that the iPSCs expressed high levels of pluripotency associated markers OCT4 and SOX2.



Karyotype (ISCN2013): 46, XX [20]

Normal karyotype (46, XX) was found in hiPSCs with Laminin 511 (LA8-H5283) coating after 10 passages.

Bioactivity-BLI

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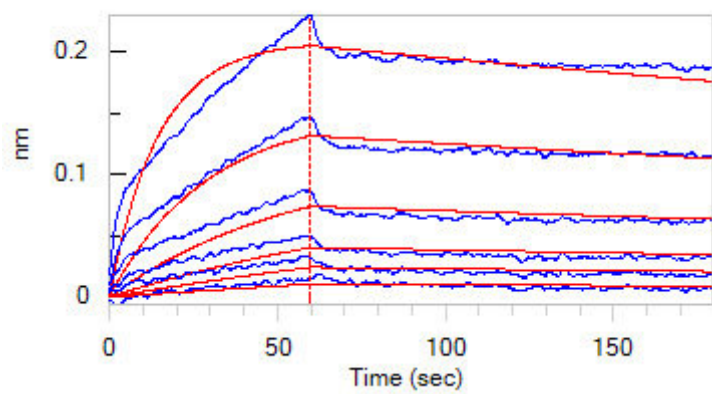


Human Laminin 511 Protein, premium grade

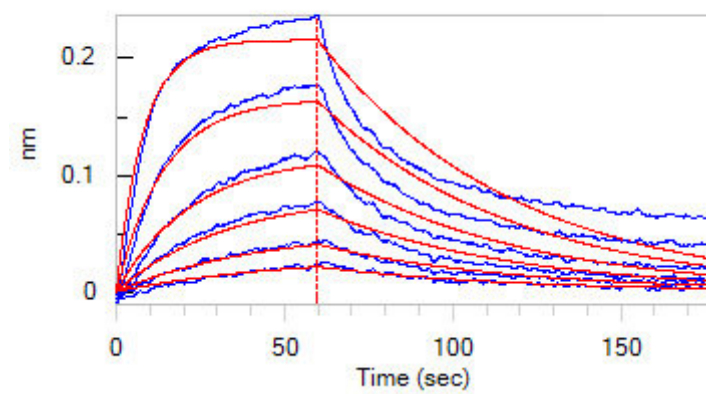
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BIOSYSTEMS
Acro



Loaded Human Laminin 511 Protein, premium grade (Cat. No. LA8-H5283) on Protein A Biosensor, can bind Human ITGA3&ITGB1 Heterodimer Protein, His Tag&Tag Free (Cat. No. IT1-H52Wc) with an affinity constant of 3.82 nM as determined in BLI assay (ForteBio Octet Red96e) (QC tested).



Loaded Human Laminin 511 Protein, premium grade (Cat. No. LA8-H5283) on Protein A Biosensor, can bind Human ITGA6&ITGB1 Heterodimer Protein, His Tag&Tag Free (Cat. No. IT1-H52W7) with an affinity constant of 16.3 nM as determined in BLI assay (ForteBio Octet Red96e) (Routinely tested).

Clinical and Translational Updates

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