



## 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

<b>Purity (SDS PAGE)</b>	> 95%
<b>Mycoplasma Test</b>	Negative
<b>Sterility Test</b>	Negative
<b>Integrin Binding Assay</b>	$\leq 10$ nM
<b>Endotoxin Test</b>	< 0.01 EU per $\mu$ 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  $\mu$ 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  $-20^{\circ}\text{C}$  or lower.

*Please avoid repeated freeze-thaw cycles.*

This product is stable after storage at:

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

## Bioactivity-Stem Cell Culture

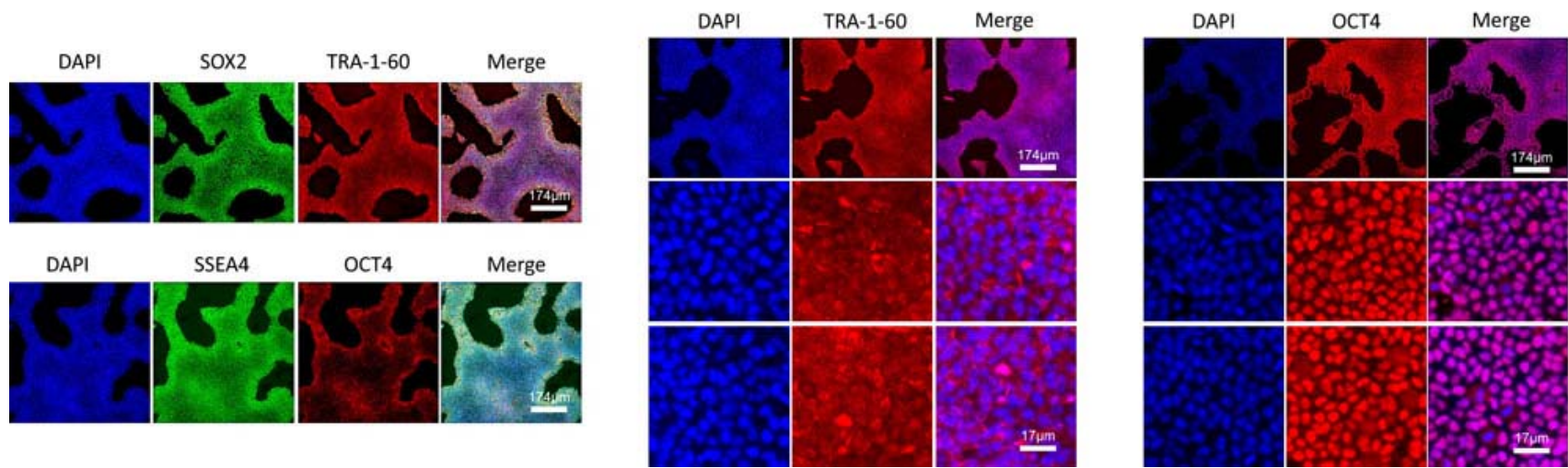
[View Protocol](#)

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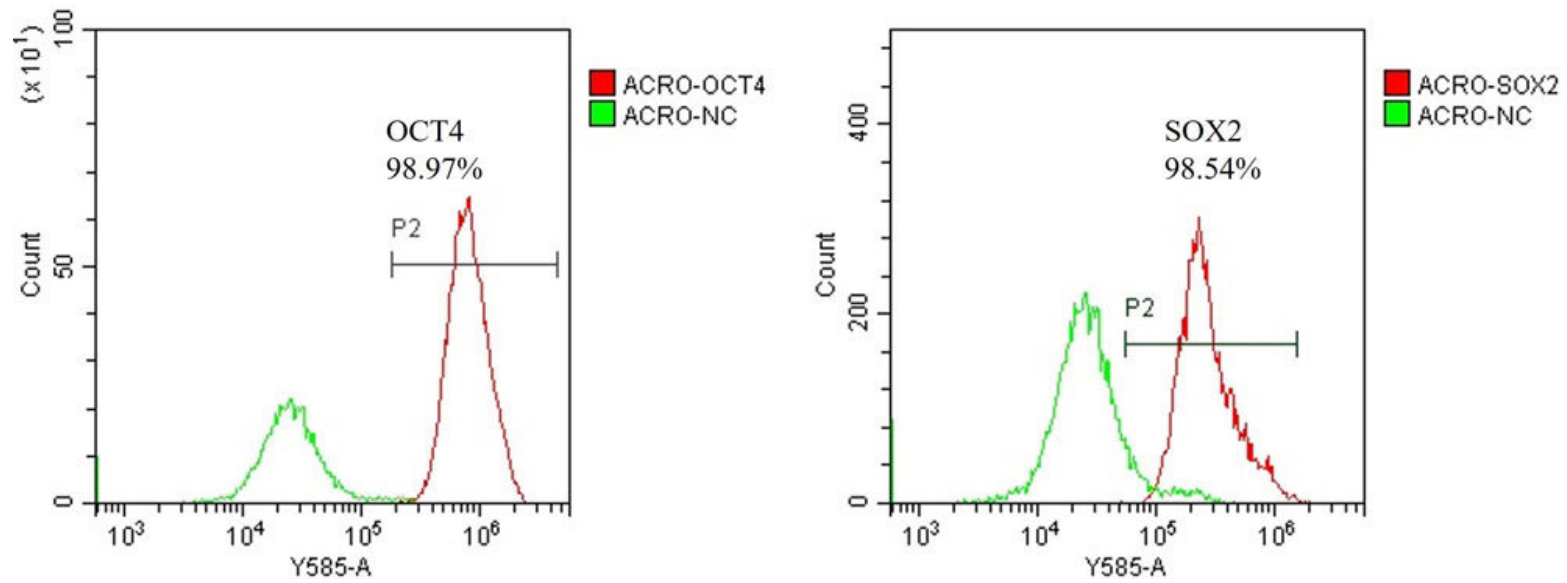


# Human Laminin 511 Protein, premium grade

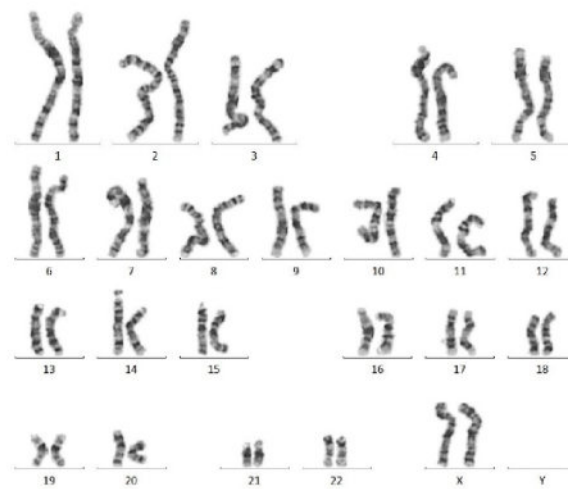
Catalog # LA8-H5283



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]

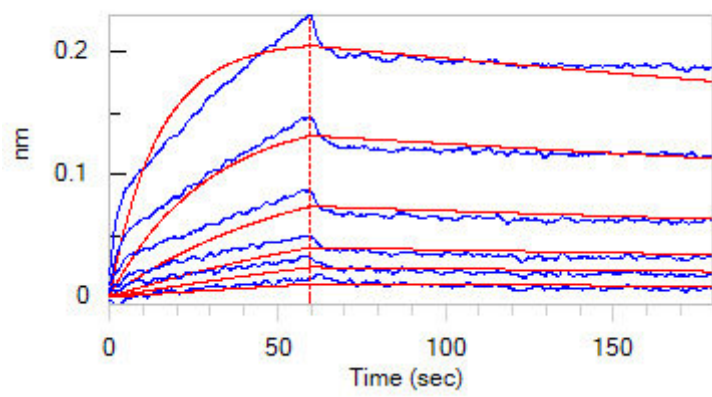
Normal karyotype (46, XX) was found in hiPSCs with Laminin 511 (LA8-H5283) coating after 10 passages.

## Bioactivity-BLI

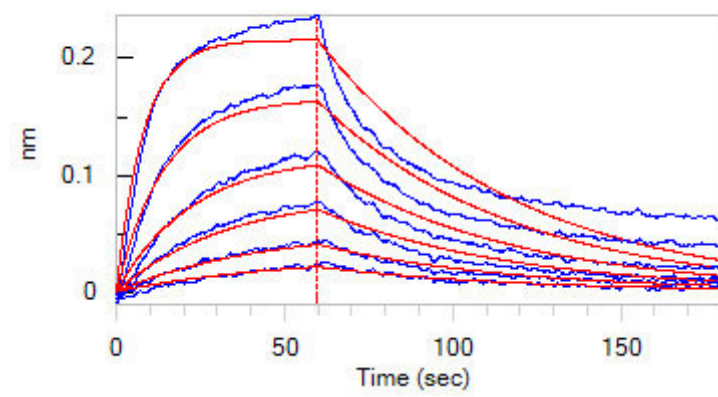
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Loaded Human Laminin 511 Protein, premium grade (Cat. No. LA8-H5283) on Protein A Biosensor, can bind Human ITGA3&ITGB1 Heterodimer Protein, His Tag&Tag Free (Cat. No. IT1-H52Wc) with an affinity constant of 3.82 nM as determined in BLI assay (ForteBio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