

# iMatrix-511MG

Product No. AMS.892 005 1,050 µg

Version 003  
Store at 2-15°C

**Product description:** iMatrix-511MG is a recombinant human laminin-511 E8 fragment protein expressed in Chinese Hamster Ovary (CHO)-S cells. iMatrix-511MG contains the integrin-binding site of the laminin-511 molecule. iMatrix-511MG is a useful cell culture substrate for feeder-free culture and single-cell passage of ES cells and iPS cells, facilitating stable culture expansion. iMatrix-511MG is also useful for the culture of other cells adhering to laminin-511.

**Content:** Recombinant human laminin-511 E8 fragment protein in PBS(-)

**Concentration:** 0.5 mg/mL

**Amount:** Product No. 892 005 1,050 µg / 6 tubes  
175 µg / 0.35 mL / tube

**Storage:** Store at 2°C to 15°C, protect from light.

**Expiration date:** The shelf life is 2 years from the date of manufacture. The expiration date is printed on the outer carton.

**Activity:** The dissociation constant (Kd) for the binding with integrin  $\alpha 6\beta 1$  is 1 nM or less.

**Methods of use:** By either of the following methods, iMatrix-511MG can be coated onto a culture vessel.

**The optimum coating density may differ by cell-type, cell-line, medium selected, or purpose.** Insufficient coating density may result in the detachment of cells and varied cell conditions while the excessive coating density may lead to difficulty in detaching cells for passage.

## A. Pre-coating method

Determine the optimal coating density. 0.5 µg/cm<sup>2</sup> is a standard but test between 0.1 and 1.5 µg/cm<sup>2</sup>.

- 1) Dilute iMatrix-511MG with PBS(-). Use the diluted iMatrix-511MG immediately. To coat with 0.5 µg/cm<sup>2</sup> onto a 6-well plate with 9.6 cm<sup>2</sup>/well, dilute 9.6 µL of iMatrix-511MG with 2 mL of PBS(-) per well.
- 2) Place the diluted iMatrix-511MG into a culture vessel and incubate either at 37°C for 1 h, or at room temperature for 3 h, or at 4°C overnight.
- 3) Aspirate the coating solution. Then, immediately seed your cells. **Do not allow the coated surface to dry.**

## B. Pre-mixing method

Determine the optimal coating density for cell culture. The standard density is 0.25 µg/cm<sup>2</sup> but test between 0.1 and 1.5 µg/cm<sup>2</sup>. The optimal coating density may be affected by the medium and cell density of the cell suspension.

- 1) Add iMatrix-511MG to the cell suspension. To coat with 0.25 µg/cm<sup>2</sup> onto a 6-well plate with 9.6 cm<sup>2</sup>/well, add 4.8 µL of iMatrix-511MG to 2 mL of the cell suspension per well.
- 2) Place the cell suspension containing iMatrix-511MG into a culture vessel.

\*If you face difficulties in detaching cells for passage, re-adjust the conditions (e.g., reduce the coating density).

## References:

Taniguchi Y. *et al.* (2009), *J. Biol. Chem.* **284** (12): 7820-31  
Miyazaki T. *et al.* (2012), *Nat. Commun.* **3**: 1236  
Nakagawa M. *et al.* (2014), *Sci. Rep.* **4**: 3594  
Takashima Y. *et al.* (2014), *Cell* **158** (6): 1254-69  
Miyazaki T. *et al.* (2017), *Sci. Rep.* **7**: 41165  
Kikuchi T. *et al.* (2017), *Nature* **548** (7669): 592-6  
Goparaju S.K. *et al.* (2017), *Sci. Rep.* **7**: 42367  
Hayashi R. *et al.* (2017), *Nat. Protoc.* **12** (4): 683-96  
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**Caution:** In the event of accidental ingestion or contact with the eyes, immediately wash the affected area and seek medical attention.

**Product information:** Current information including references and FAQs are available online at [www.amsbio.com/imatrix-recombinant-laminin-511/](http://www.amsbio.com/imatrix-recombinant-laminin-511/).

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