PRODUCT SHEET

Made in FRANCE by Cell&Soft

La FRENCH TECH

MecaTract

For TRACTION FORCE MICROSCOPY

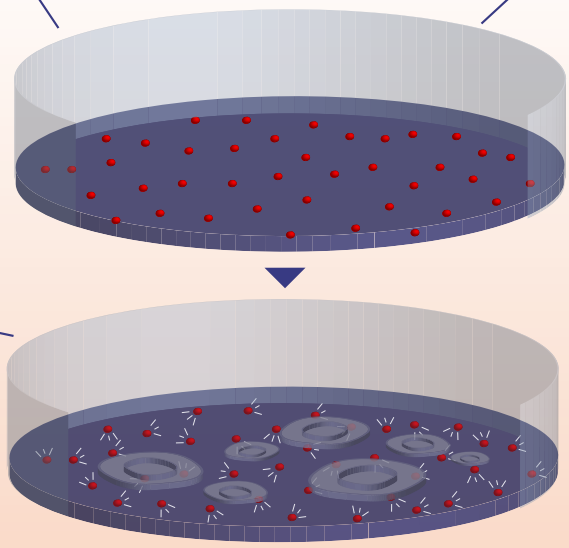
By Cell&Soft

Why using µpattern MecaTract culture plates ?

Cell-contractile forces generated by the actomyosin cytoskeleton and transmitted to the extracellular matrix (ECM) drive cell adhesion, spreading, and migration. These forces are known to be critical during embryo morphogenesis, wound healing, immune response as well as pathological processes, such as cancer metastasis. Traction force microscopy (TFM) is a recognized experimental technique that measures the surface forces, also termed as tractions, that cells exert on a substrate. It relies on the computational analysis of the direction and the magnitude of elastic substrate deformations to reconstruct cell-generated traction forces. These deformations can be tracked and quantified by recording the displacement of fluorescent beads embedded in the substrate, as a result of the mechanical stress induced by an adherent cell.

Description

Polyacrylamide gel with fluorescent carboxylate-modified microspheres uniformly dispersed inside.



Applications

Traction Force Microscopy

Characteristics

Storage

Temperature: +4°C |

Shelf life: 3 months |

Fluorescent beads*

Size: 0.2 µm |

Fluorophore: Dark red |

Wavelength (Exit./Emiss.): |

660/680 nm |

Cell seeding surface: 6.15 cm² |

*Specific beads on request

Benefits

| Relevant & compliant
| Disruptive
| Plug & Play
| No biological risk (synthetic matrix)
| Glass bottom (ideal for microscopy)
| Stiffness & coating are decoupled

Get your own functionnal MecaTract culture plate:

1 CHOOSE YOUR STIFFNESS

Uniform rigidity*

8 kPa | 10 kPa | 12 kPa

*Specific stiffness on request

Rigidity step

1 kPa | 1,5 kPa | 2 kPa | 3,5 kPa | 4 kPa

5 kPa | 6,5 kPa | 7,5 kPa | 8 kPa | 9,5 kPa

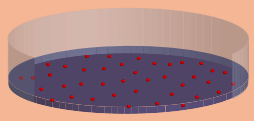
2 CHOOSE YOUR COATING

Culture dedicated surface chemistry

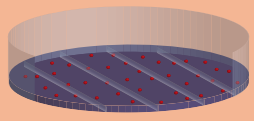
- Vitronectin (human, recombinant truncated)
- Fibronectin (human, plasma)
- Collagen I (rat, tail)
- Laminin (mouse, EHC sarcoma)
- Poly-Ornithine / Laminin
- Poly-Ornithine

3 UNIQUE PD35 FORMAT

Uniform rigidity



Rigidity step



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