

RTCA™ Consumables:

For label-free, real-time cellular analysis



The xCELLigence® and iCELLigence™ Systems provide a unique and powerful means to monitor cells in real-time without the potential artifacts generated through the use of labels. This non-invasive measurement allows detection of changes in adherence, morphology and viability without the need for over-expression of reporter and target proteins. This provides highly physiologically relevant data throughout the entire time course of the experiment.

The E-Plate® features an innovative micro-electrode configuration that covers 80% of each well bottom's surface area. The real-time measurement of impedance across the electrodes provides sensitive immediate detection of the cellular condition and response from low cell numbers to confluency. This enables a wide array of potential applications including (but not limited to):

- Cell proliferation
- Cell quality
- Compound mediated cytotoxicity
- Cell-mediated cytotoxicity
- Cell adhesion and spreading
- Functional monitoring of receptor tyrosine kinase and GPCR signaling
- Cell mediated cytolysis
- Barrier function
- Viral quantification

The xCELLigence CIM-Plate® is a modified-Boyden chamber design comprised of a disposable top and bottom chamber featuring the same innovative micro-electrode configuration on the bottom side of a microporous polyethylene terephthalate (PET) membrane. The median pore size of this membrane is 8 µm. This design and real-time measurement allows for precise quantitative and dynamic information for applications in:

- Cell invasion and migration

**For life science research only.
Not for use in diagnostic procedures.**



E-Plate 16
Dimensions: W 4.0 cm x D 8.7 cm x H 1.96 cm (with cover)
Well Spacing: 9 mm center-to-center as per ANSI/SBS 4-2004 standard
Well Volume: 270 µl ± 10 µl
Well Bottom Diameter: 5.0 mm ± 0.075 mm
Electrical Interface: Compatible with RTCA DP Analyzer
Sensor Impedance: 17 Ω ± 5 Ω at 10 kHz, when measured with a 1 x PBS solution
Materials: Polystyrene well plate, glass sensor substrate UV irradiated
Environment: Temperature +15°C to +40°C relative humidity 98% maximum without condensation
E-Plate VIEW 16
All E-Plate 16 specifications apply
Viewing Window: 4 center electrodes removed to aid in microscopy (~400 µm width)



Ihr Ansprechpartner
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CIM-Plate 16

Dimensions: W 4.0 cm x D 8.7 cm x H 2.6 cm (assembled, with cover)

Well Spacing: 9 mm center-to-center as per ANSI/SBS 4-2004 standard

Upper Well Volume: 180 $\mu\text{l} \pm 5 \mu\text{l}$

Upper Well Volume: 162 $\mu\text{l} \pm 3 \mu\text{l}$

Membrane: PET membrane with 8 μm pore size

Well Bottom Diameter: 5.0 mm ± 0.075 mm

Electrical Interface: Compatible with RTCA DP Analyzer

Sensor Impedance: 24 $\Omega \pm 8 \Omega$ at 10 kHz, when measured with a 1 x PBS solution

Materials: PET well plate, PET membrane sensor substrate

UV irradiated

Environment: Temperature +15°C to +40°C relative humidity 98% maximum without condensation

E-Plate 96

Dimensions: W 12.77 cm x D 8.55 cm x H 1.75 cm (with cover)
– Footprint complying with ANSI/SBS 1-2004 requirements

Well Spacing: 9 mm center-to-center as per ANSI/SBS 4-2004 standard

Well Volume: 243 $\mu\text{l} \pm 5 \mu\text{l}$

Well Bottom Diameter: 5.0 mm ± 0.05 mm

Electrical Interface: Compatible with RTCA SP and MP Stations

Sensor Impedance: 17 $\Omega \pm 5 \Omega$ at 10 kHz, when measured with a 1 x PBS solution

Materials: Polystyrene well plate, glass sensor substrate

UV irradiated

Environment: Temperature +15°C to +40°C relative humidity 98% maximum without condensation

E-Plate VIEW 96

All E-Plate 16 specifications apply

Viewing Window: 4 center electrodes removed to aid in microscopy (~400 μm width)

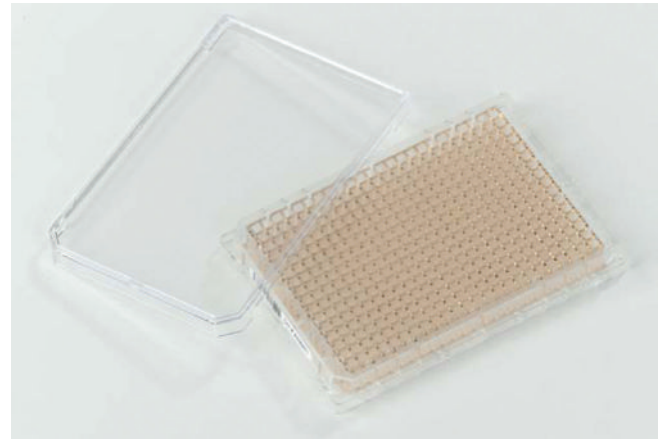


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E-Plate Cardio 96

Dimensions: W 12.77 cm x D 8.55 cm x H 1.75 cm (with cover)
– Footprint complying with ANSI/SBS 1-2004 requirements

Well Spacing: 9 mm center-to-center as per ANSI/SBS 4-2004 standard

Well Volume: 243 μl \pm 5 μl

Well Bottom Diameter: 5.0 mm \pm 0.05 mm

Electrical Interface: Compatible with RTCA Cardio Stations

Sensor Impedance: 17 Ω \pm 5 Ω at 10 kHz, when measured with a 1 x PBS solution

Materials: Polystyrene well plate, glass sensor substrate

UV irradiated

Environment: Temperature +15°C to +40°C relative humidity 98% maximum without condensation

E-Plate 384

Dimensions: W 12.77 cm x D 8.55 cm x H 1.75 cm (with cover)
– Footprint complying with ANSI/SBS 1-2004 requirements

Well Spacing: 4.5 mm center-to-center as per ANSI/SBS 4-2004 standard

Well Volume: 95 μl \pm 5 μl

Well Bottom Dimension: 2.5 mm \pm 0.01 mm (square)

Electrical Interface: Compatible with RTCA HT Station

Sensor Impedance: 112 Ω \pm 22 Ω at 10 kHz, when measured with a 1 x PBS solution

Materials: Polystyrene well plate, PET sensor substrate

Gamma irradiated

Environment: Temperature +15°C to +40°C relative humidity 98% maximum without condensation



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E-Plate L8

Dimensions: W 4.0 cm x D 8.7 cm x H 1.9 cm (with cover)

Well Spacing: 8-well, single column. 9 mm center-to-center spacing as per ANSI/SBS 4-2004 standard

Well Volume: 830 $\mu\text{l} \pm 10 \mu\text{l}$

Well Bottom Area: 64 $\text{mm}^2 \pm 10\%$

Electrical Interface: Compatible with RTCA iCELLigence Instrument

Sensor Impedance: 5.6 $\Omega \pm 1.7 \Omega$ at 10 kHz, when measured with a 1 x PBS solution

Materials: Polystyrene well plate, glass sensor substrate

UV irradiated

Environment: Temperature +20°C to +40°C relative humidity 98% maximum without condensation

E-Plate L8 PET

All E-Plate L8 specifications apply, with the exception of the following

Materials: Polystyrene well plate, PET sensor substrate



E-Plate Insert 16

Dimensions: 7.02 cm x 1.7 cm x 1.11 cm (W x D x H)

Well Format: 16-well (8 x 2) format as per the ANSI/SBS 4-2004 standard for 96-well microplates

Well Volume: 95 $\mu\text{l} \pm 10\%$

Membrane Material: PET

Membrane Area: 5.4 $\text{mm}^2 \pm 12\%$

Pore Size: 0.4 $\mu\text{m} \pm 0.1 \mu\text{m}$

Pore Density: 8E+07 pores/ cm^2 – 1.5E+08 pores/ cm^2

UV irradiated

Environment: Temperature, +15°C to +40°C; relative humidity, 98% maximum without condensation

Receiver Plate

Dimensions: 7.46 cm x 2.43 cm x 1.5 cm (W x D x H) (With Plate Cover)

Well Format: 16-well (8 x 2) format as per the ANSI/SBS 4-2004 standard for 96-well microplates

Well Volume: 244 $\mu\text{l} \pm 25 \mu\text{l}$ (Without Insert)

Well Volume: 114 $\mu\text{l} \pm 17 \mu\text{l}$ (With Insert)

Material: Biocompatible surfaces

UV irradiated

Environment: Temperature, +15°C to +40°C; relative humidity, 98% maximum without condensation



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