Cyagen Cells & Media

Product Presentation
2012
Cyagen Biosciences, Inc.
About Cyagen

• Offers the world’s most comprehensive list of stem cells
• OEM manufacturer for several prominent vendors including Life Technologies
• All products are manufactured under the ISO9001:2008 standard
• Cited in top journals including Nature and PNAS
Cells Products
Mesenchymal Stem Cells (MSCs)

- Express specific clusters of differentiation proteins and have a strong capacity for self-renewal while retaining multipotency
- Lines include:
  - Mouse (Balb/c, C57BL/6)
  - Rat (SD, Wistar, F344)
  - Dog
  - Rabbit
  - With GFP/RFP
Adipose-Derived MSCs

- Cryopreserved at the second passage
- Strong capacity for self-renewal while maintaining multipotency
- Lines include:
  - Rats (Wistar, SD)
  - Dog
  - Rabbit
  - C57BL/6 mouse
  - With GFP

![Self-renewal Capacity Test: Growth Curve](chart)
Mouse Embryonic Stem Cells

- Maintain diploid karyotype after extended passages \textit{in vitro}
- Ability to form embryoid bodies \textit{in vitro} and tetratomas in immune-deficient mice
- Mouse lines include:
  - Strain C57BL/6
  - Strain 129
  - With GFP/RFP

\textbf{In vitro Differentiation:}

Fluorescence images (400X) demonstrating \textit{in vitro} differentiation of embryoid bodies derived from OriCell™ Strain 129 Mouse ESCs. EB tissue slices were stained with antibodies against the endoderm marker AFP (red), the mesoderm marker \(\alpha\)-SMA (red), the ectoderm marker Nestin (red).
SD Rat Neural Stem Cells

- Can be differentiated into neurons, astrocytes, and oligodendrocytes
- Derived from brain tissues of mouse or rat embryos (12.5 dpc), cultured as neurospheres, and cryopreserved at the second passage

**Self-renew Capability Verification:**

Images of OriCell™ SD Rat NSCs at different passages plated for 2 days
Mouse Embryonic Fibroblast

- Derived from strain ICR mouse embryos (12.5 dpc) and cultured as a monolayer for one passage
- Cells are cryopreserved at the second passage after γ-ray irradiation
- Different packages
  - 1x10^6/vial
  - 2x10^6/vial
  - 1x10^7/vial
Neurons

- Derived from the hippocampi or cortices of mice and cryopreserved at the second passage
- Lines include:
  - Fischer 344 fetal rat
  - SD rat fetal rat
  - Wistar fetal rat
- Cell recovery viability: $\geq 50\%$
- Purity:
  - MAP2 positive cells $\geq 80\%$
  - $\beta$III-tubulin positive cells $\geq 80\%$
Mesenchymal Stem Cell Growth Media

- Easy-to-use kit
- Maintains pluripotency, normal karyotype, and proliferation capability
- Certified formulation for culturing MSCs

<table>
<thead>
<tr>
<th>Products</th>
<th>Cat. No.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Human</strong> Mesenchymal Stem Cell Growth Medium</td>
<td>HUXMX-90011</td>
</tr>
<tr>
<td><strong>Mouse</strong> Mesenchymal Stem Cell Growth Medium</td>
<td>MUXMX-90011</td>
</tr>
<tr>
<td>Mesenchymal Stem Cell Growth Medium</td>
<td>GUXMX-90011</td>
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### Mesenchymal Stem Cell Differentiation Media

- **Batch-to-batch consistency**
- Can be used with other MSCs derived from various origins
- Includes staining reagents such as Alcian Blue

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<tr>
<td>MSC Osteogenic Differentiation Medium</td>
<td>GUXMX-90021</td>
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<tr>
<td>MSC Adipogenic Differentiation Medium</td>
<td>GUXMX-90031</td>
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<tr>
<td>MSC Chondrogenic Differentiation Medium</td>
<td>GUXMX-90041</td>
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<tr>
<td>Embryoid Body Formation Medium</td>
<td>MUXES-90051</td>
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Adipose-Derived Stem Cell Growth Media

- Batch-to-batch consistency
- Easy-to-use kit
- Maintains pluripotency, normal karyotype, and proliferation capability
- Certified formulation for culturing ADSCs

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<td><strong>Human</strong> Adipose-Derived Stem Cell Growth Medium</td>
<td>HUXMD-90011</td>
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<tr>
<td><strong>Mouse</strong> Adipose-Derived Stem Cell Growth Medium</td>
<td>MUXMD-90011</td>
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<tr>
<td>Adipose-Derived Stem Cell Growth Medium</td>
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Embryonic Stem Cell Growth Media

- Batch-to-batch consistency
- Easy-to-use kit
- Maintains pluripotency, normal karyotype, and proliferation capability
- Certified formulation for culturing embryonic stem cells

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<td><strong>Mouse</strong> Embryonic Stem Cell Growth Medium</td>
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Neural Stem Cell Growth Media

• Batch-to-batch consistency
• Easy-to-use kit
• Maintains pluripotency, normal karyotype, and proliferation capability.
• Certified formulation for culturing a vast majority of neural stem cells

Products

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<tr>
<td>Neural Stem Cell Growth Medium</td>
<td>HUXMD-90011</td>
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</table>
Mammalian Cell Cryopreservation Reagents

- ≥ 90% cell viability after freeze-thaw
- Maintains pluripotency, normal karyotype, and proliferation capabilities after freeze-thaw

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<tr>
<td>Cryopreservation Medium (for general purpose)</td>
<td>CRYO-10001</td>
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<tr>
<td>NCR Cryopreservation Medium</td>
<td>NCRC-10001</td>
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<tr>
<td>NCR Protein-Free Cryopreservation Medium</td>
<td>NCPF-10001</td>
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<tr>
<td>Neural Stem Cells NCR Protein-Free Cryopreservation Medium</td>
<td>GUXNX-07021</td>
</tr>
<tr>
<td>Neuron NCR Protein-Free Cryopreservation Medium</td>
<td>GUXNR-07021</td>
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Cyagen offers various high quality reagents with batch-to-batch consistency.

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<td>ITS (Insulin, transferrin, selenium)</td>
<td>ITSS-10201</td>
</tr>
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<td>Non-Essential Amino Acids</td>
<td>NEAA-10201</td>
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<tr>
<td>OsrHSA – Recombinant Human Serum Albumin</td>
<td>OsrHSA</td>
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<tr>
<td>B28 Neuron Culture Supplement</td>
<td>BNCS-50101</td>
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<tr>
<td>Animal Protein-Free Dissociation Reagent (a substitute for trypsin that is animal component-free)</td>
<td>APFD-10001</td>
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Cyagen also offers many other products and services. Please visit our website at www.cyagen.com to learn more.