**Figure 1. Comparison of Cell Engineering Timelines**

**Table 1. Comparison of Cell Engineering Timelines**

<table>
<thead>
<tr>
<th>Method</th>
<th>Time [days]</th>
<th>Cost [$/cell line]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traditional Methods</td>
<td>80</td>
<td>$80,000</td>
</tr>
<tr>
<td>Jump-In™ Retargeting</td>
<td>20</td>
<td>$2,000</td>
</tr>
</tbody>
</table>

**Figure 2. Retargeting Jump-In™ Parental Cell Lines**

**Figure 3. Homologous Recombination with R4 Integrate**

**Figure 4. Cost and Timeline vs Traditional Methods**

**Figure 5. Stability of Retargeted Cells**

**Figure 6. Retargeting is Highly Reproducible**

**Figure 7. Inducible Jump-In™ TREx™ Cell Lines**

**Figure 8. Functional Assays Using Retargeted Jump-In™ GripTite™ HEK293 Cells**

**CONCLUSION**

Cell Engineering using Jump-In™ Parental Cell Lines containing a single R4 integration site provides significant advantages over traditional methods.

Rapid and efficient generation of engineered cell lines

- Functional cell pools can be generated in as little as 2-3 weeks

- No laborious clone generation and analysis

- Cost/cell line quickly approach traditional methods when >5 cell lines are made

Accepts large multi-gene inserts

Specific expression

- All cell lines derived from a given parental Jump-In™ cell line express the gene of interest from the same genomic locus – ideal for the comparative analysis of gene families, isoforms, or orthologs

- Inducibly express your gene of interest using the T-ReX™ parental cell lines

**Reliable results**

- Retargeted cell lines show stability over at least 20 passages

- Retargeting is highly reproducible and efficient with almost 100% positive cells

- Retargeted cells show good performance in functional cellular assays

**REFERENCES**


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