



## Data Sheet

### pCSG-IBA104

Cat. No.: 5-5104-001

Version: 3.0  
Revision Date: 28.07.2021

|                         |  |
|-------------------------|--|
| <b>Description</b>      | <b>StarGate Acceptor Vector for transient expression as well as for generation of stable mammalian cell lines. Extrachromosomal replication in mammalian cells could occur either by origin of replication from Epstein-Barr Virus (oriP) or by SV40 ori. For the former the vector provides the EBNA-1 gene and for the latter the cell line has to be latently infected with SV40 or express the SV40 large T antigen (e.g., HEK293T, COS-1, COS-7). Stable cell lines can be selected by the neomycin resistance gene (NeoR). In addition, the human cytomegalovirus (CMV) immediate-early promoter enables a high-level expression in a wide range of mammalian cells. The expressed recombinant protein will be secreted into the medium.</b> |
| <b>Affinity tag</b>     | Twin-Strep-tag <sup>®</sup> is fused to the N-terminus of the recombinant protein.   |
| <b>Secretion</b>        | BM40 secretory signal peptide is encoded for the transfer of the expressed protein into the medium. During the translocation the signal peptide is removed by endogenous proteases.  |
| <b>Cloning Strategy</b> | Cloning into StarGate Acceptor Vectors has to be done with the restriction enzyme Esp3I. There is no Multiple Cloning Site (MCS) available that can be used for the integration of the gene of interest instead (see manual).  |
| <b>Resistance</b>       | Ampicillin: for selection of transformed E. coli cells<br>Neomycin: for selection of stable cell lines   |
| <b>Form</b>             | 5 µg, dissolved in 20 µl TE buffer, pH 8.0: 10 mM Tris/HCl, 1 mM EDTA  |
| <b>Concentration</b>    | 250 ng/µl  |
| <b>Stability</b>        | 12 months after shipping   |
| <b>Storage</b>          | recommended: 2-8 °C for frequent usage, -20 °C for long-term storage   |
| <b>Shipping</b>         | room temperature   |
| <b>Hazards</b>          | Product is not classified as hazardous according to (EC) No 1272/2008 [CLP].<br>A Material Safety Data Sheet is provided.  |

#### For research use only

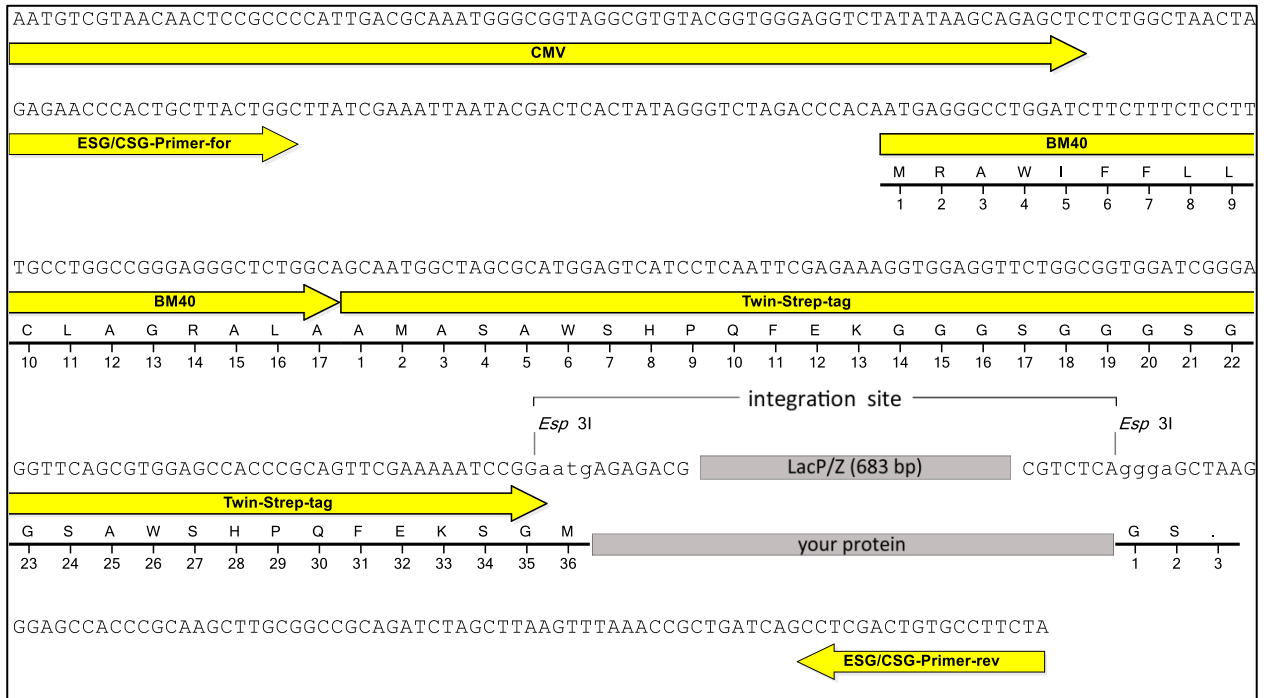
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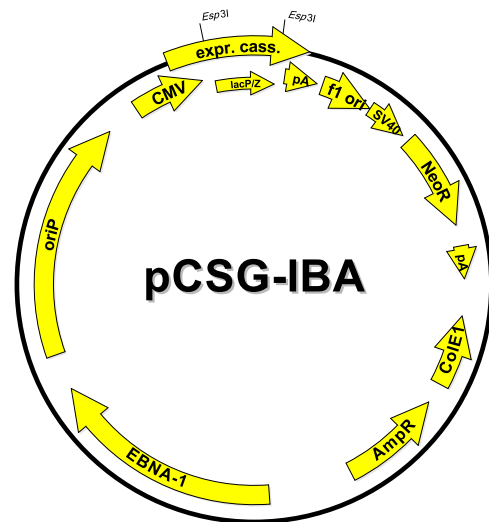
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## Expression cassette of pCSG-IBA104



LacP/Z cassette = contains LacZ alpha fragment under control of a separate promoter, which allows alpha complementation of *LacZ* mutations such as *LacZΔM15* as in *E. coli* DH5α or TOP10.  
 your protein = after StarGate cloning using *Esp3I* your gene of interest will be located here



| Features                          | from bp | to bp | Sequencing primer              |
|-----------------------------------|---------|-------|--------------------------------|
| polyA signal sequence             | 1       | 213   | ESG/CSG-Primer-for             |
| f1 origin                         | 259     | 687   |                                |
| SV40 ori                          | 692     | 1035  | 5' - GAGAACCCACTGCTTACTGGC -3' |
| Neomycin resistance gene          | 1097    | 1891  | ESG/CSG-Primer-rev             |
| ColE1 ori                         | 2637    | 3222  |                                |
| Ampicillin resistance gene        | 4253    | 3393  | 5' - TAGAAGGCACAGTCGAGG -3'    |
| EBNA-1                            | 4944    | 6869  |                                |
| oriP, episomal replication origin | 7170    | 9145  |                                |
| CMV promoter                      | 9426    | 10013 |                                |
| forward primer binding site       | 10026   | 10046 |                                |
| BM40 signal sequence              | 10089   | 10142 |                                |
| Twin-Strep-tag®                   | 10143   | 10244 |                                |
| LacZ alpha fragment               | 10473   | 10874 |                                |
| reverse primer binding site       | 11005   | 11022 |                                |
| total vector length               |         | 11022 |                                |