

## Data Sheet

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## pEXPR-IBA43

Cat. No. : 2-1943-000

Lot No.: 1943-

Last date of revision

March 06

Version 1943-1

|  |   |
|--|---|
| <b>Description</b>                         | Eukaryotic expression vector designed for high-level stable and non-replicative transient expression in most mammalian hosts containing the following elements: <ul style="list-style-type: none"> <li>• Human cytomegalovirus (CMV) immediate-early promoter for high-level expression in a wide range of mammalian cells</li> <li>• Multiple cloning site</li> <li>• Neomycin resistance gene for selection of stable cell lines</li> <li>• Episomal replication in cell lines that are latently infected with SV40 or that express the SV40 large T antigen (e.g. COS-1, COS-7)</li> <li>• The expressed recombinant protein will be localized in the cytoplasm.</li> <li>• <i>Strep</i>-Tactin affinity tag (<i>Strep</i>-tag II) for the purification of recombinant protein via <i>Strep</i>-Tactin resins. The <i>Strep</i>-tag is fused to the C-terminus of the recombinant protein.</li> <li>• 6xHistidine-tag for the purification of recombinant protein via Ni-NTA resins. The 6xHistidine-tag is fused to the N-terminus of the recombinant protein.</li> </ul> |
| <b>Resistance for selection in E. coli</b> | Ampicillin  |
| <b>Form</b>                                | 5 µg, dissolved in TE buffer (10 mM Tris/HCl pH 8.0, 1 mM EDTA); 20 µl  |
| <b>Concentration</b>                       | 250 ng/µl   |
| <b>Storage</b>                             | 4 °C for frequent usage, -20 °C for long-term storage   |
| <b>Shipment</b>                            | Room temperature  |

### For research use only

*Strep*-tag® technology for protein purification and detection is covered by US patent 5,506,121, UK patent 2272698 and French patent 93 13 066; the tetracycline promoter based expression system is covered by US patent 5,849,576 and *Strep*-Tactin® is covered by US patent 6,103,493. Further patent applications are pending world-wide. Purchase of reagents related to these technologies from IBA provides a license for non-profit and in-house research use only. Expression or purification or other applications of above mentioned technologies for commercial use require a separate license from IBA. A license may be granted by IBA on a case-by-case basis, and is entirely at IBA's discretion. Please contact IBA for further information on licenses for commercial use. *Strep*-tag® and *Strep*-Tactin® are registered trademarks of IBA GmbH. Use of the CMV promoter is covered under U.S. patent nos. 5,168,062 and 5,385,839 owned and licensed by the University of Iowa Research Foundation and may be used for research purposes only. Commercial users must obtain a license to these patents directly from the University of Iowa Research Foundation. Inquiries for commercial use should be directed to: Brenda Akins, University of Iowa Research Foundation (UIRF), 214 Technology Innovation Center, Iowa City, IA 52242. The 6xHistidine-tag is licensed from Hoffmann-La Roche, Inc., Nutley, NJ and/or Hoffmann-La Roche Ltd., Basel, Switzerland and is provided only for the use in research. Information about licenses for commercial use is available from QIAGEN GmbH, Max-Volmer-Str. 4, D-40724 Hilden, Germany.

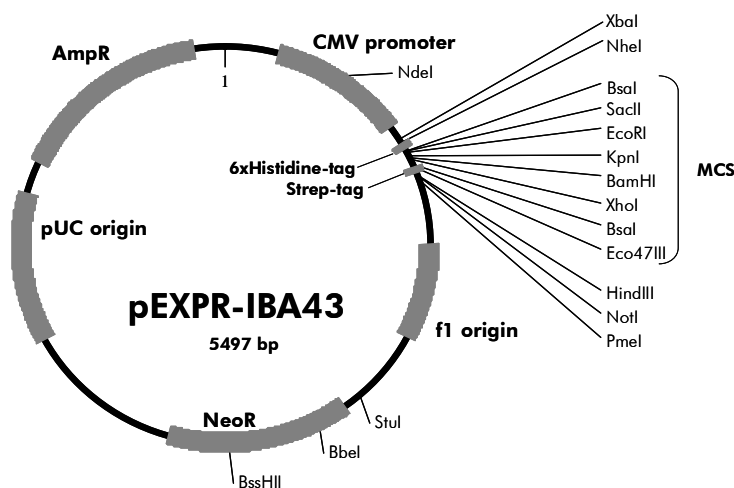
## Multiple Cloning Site of pEXPR-IBA43

|      |   |      |
|------|---|------|
| 721  | AAAATCAACGGGACTTTCCAAAAATGTCGTAACAACCTCCGCCCATTTACGCAAAATGGGCGGTAGGCGGTACGGTGGGAG   | 800  |
|      | CAAT  |      |
| 801  | GTCATATAAGCAGAGCTCTCTGGCTAACTAGAGAACCCTGCTTACTGGCTTATCGAAATTAATACGACTCACTATAG   | 880  |
|      | TATA <span style="margin-left: 150px;">forward primer</span>  |      |
|      | link <span style="margin-left: 50px;">6xHistidine-tag</span><br>M <u>A S R</u> G S H H H H H H G A G D R G P E F E  |      |
| 881  | GGTCTAGACCCACCATGGCTAGCAGAGGATCGCATCACCATCACCATCACGGggccGGAGACCGGGTCCCGAATTCGAG   | 960  |
|      | XbaI <span style="margin-left: 50px;">NheI</span> <span style="margin-left: 100px;">BsaI</span> <span style="margin-left: 50px;">EcoRI</span><br><span style="margin-left: 150px;">SacII</span> |      |
|      | link <span style="margin-left: 50px;">Strep-tag</span><br>L G T R G S L E V D L Q G D H G L <u>S A W</u> S H P Q F E K  |      |
| 961  | CTCGGTACCCGGGGATCCCTCGAGGTCGACCTGCAGGGGACCATGGTCTCAGcgctTGGAGCCACCCGAGTTCGAAAA  | 1040 |
|      | KpnI <span style="margin-left: 50px;">BamHI XhoI</span> <span style="margin-left: 100px;">BsaI</span> <span style="margin-left: 50px;">Eco47III</span>  |      |
|      | *   |      |
| 1041 | CTAATAAGCTTGGCGCCGAGATCTAGCTTAAGTTTAAACCGCTGATCAGCCTCGACTGTGCCTTCTAGTTGCCAGCCAT   | 1120 |
|      | HindIII <span style="margin-left: 100px;">PmeI</span> <span style="margin-left: 100px;">reverse primer</span><br><span style="margin-left: 50px;">NotI</span>                                   |      |

**Please note:** Restriction enzymes in bold cut twice, however, not all multiple cutting restriction enzymes are shown. The *BsaI* sites (isoschizomer of *Eco31I*) at each end of the multiple cloning site are useful for precise and oriented insertion of the recombinant gene by one cleavage reaction only. The “link” contains a restriction site which can be used e.g. for subcloning the recombinant gene into pASK-IBA vectors for bacterial expression.

## Features of pEXPR-IBA43

|                             | from bp | to bp |
|-----------------------------|---------|-------|
| CMV promoter                | 232     | 819   |
| forward primer binding site | 832     | 852   |
| 6xHistidine-tag             | 904     | 930   |
| multiple cloning site       | 931     | 1017  |
| Strep-tag                   | 1018    | 1044  |
| reverse primer binding site | 1091    | 1108  |
| f1 origin                   | 1367    | 1795  |
| Neomycin resistance gene    | 2205    | 2999  |
| pUC origin                  | 3686    | 4356  |
| Ampicillin resistance gene  | 4501    | 5361  |



### Cloning primers for the precise cloning using *BsaI* or *Eco31I*

Forward: 5'- NNNNNNGGTCTCNG GCC <sup>(N<sub>20</sub>)</sup> NNN NNN...  
 Reverse: 5'- NNNNNNGGTCTCNGC GCT <sup>(N<sub>20</sub>)</sup> NNN NNN...

### Sequencing primers:

Forward: 5'- GAGAACCCTGCTTACTGGC -3'  
 Reverse: 5'- TAGAAGGCACAGTCGAGG -3'