Protein Production Questionnaire

Please answer the following questions as completely as possible. The information here will be kept with utmost confidentiality and will only be used to generate a customized protocol for your facility.

|  |  |
| --- | --- |
| **I. Customer Information** | |
| Contact Person |  |
| Designation |  |
| Department |  |
| Company Name |  |
| Contact Number |  |
| Email Address |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **I. General Details** | | |  | |
| 1. | | Target Product | Secreted Protein  Non-secreted Protein  Monoclonal Antibody  Others: | |
| 2. | | Cell Type | Adherent Cell  Suspension Cell  Microbial  Stem Cell | |

(Different cell line, different application has to be filled in separate questionnaire).

**Adherent Cells Questionnaire**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **II. Experiment Details** | | |  | |
| 1. Cell Culture | | | | |
| 1. | | Cell Line | CHO  HEK 293  Hybridoma for IVD (In-Vitro Diagnostics)  Hybridoma for Therapeutics  Others: | |
| 2. | | Any Special features or peculiarities of the cell line or culture methods? |  | |
| 3. | | Intended Use | Human Use (Production)  Animal Use (Production)  Human Use (Research)  Animal Use (Research) | |
| 4. | | Current Culture System | T-flask  cm2 x Pcs  Petri dish  mm x Pcs  Roller Bottle  cm2 x Btls  Spinner flask  ml x Btls  Carriers: ( )  Cell Factory / Cell Stack (Multi-layer)  cm2 x Pcs  (total surface area)  Stirred-tank Bioreactor  ml x Vessel  Carriers: ( )  Others: | |
| 5. | | Media Volume Capacity | * Working Volume Capacity   mL / Pc (or /Btl)   * Total Volume Capacity   mL / Batch | |
| 6. | | If carriers are used, please specify type and amount of carrier. | Microbeads. Specify:  Fibrous matrixes Specify:  Others Specify:  Amount of carriers: | |
| 7. | | Medium exchange frequency for current system   * During Cell Culture | 24 hours (1 day)  48 hours (2 days)  72 hours (3 days)  Other: hours ( days)  Media volume per change: ml | |
| 8. | | Medium exchange frequency and volume for current system   * Post Infection | 24 hours (1 day)  48 hours (2 days)  72 hours (3 days)  Other: hours ( days)  Media volume per change: ml | |
| 9. | | Culture condition during cell culture | Media:  Serum:  Temperature:  CO2 concentration of incubator | |
| 10. | | Other additives (eg., sodium bicarbonate,Hepes buffer etc) |  | |
| 11. | | Glucose Concentration in initial culture medium | g/L | |
| 12. | | Cell Harvesting (Cell dissociation) required | Yes  No | |
| 13. | | Cell Harvest (Cell Dissociation) method if have | Trypsin  Enzymatic Dissociation Reagents  (Specify: )  Non-Enzymatic Dissociation Reagents  (Specify: )  Others: | |
| 14. | | Cell Quantification (Cell Counting) | Manual Counting  Auto-counter  Nuclei counting  Others: | |
| 15. | | Access to bio-analyzer for measuring glucose, lactate, glutamine, etc | Yes  No | |
| 16. | | System Preference | Prefer Single-Use  Prefer Multiple-Use  No preference | |
| 17. | | Current System Annual dose (product quantity) |  | |
| 18. | | Current System average total cell density  (per single system eg., per 1 roller bottle) | * Seeding Cell Density: * Harvesting End Cell Density: | |
| 19. | | Do you have scale up plan? | Yes  No | |
| 20. | | Expected Scale when scaled up  (Cell Density, Doses etc) |  | |
| 1. Protein Production | | | | |
| 21. | | Protein extraction method | Cell Harvest  Medium Harvest  Freeze/Thaw  Lysis Buffer  Others: | |
| 22. | | For medium harvest extraction method, what is the harvest process? | Single Harvest  Multiple Harvest  Interval time hrs for days  Other | |
| 1. CelCradleTM System | | | | |
| 23. | | Seeding 1 – 3 x 108 cells be difficult? | Yes  No  If yes, how many cells do you plan to seed? | |
| 24. | | CO2 incubator is exclusively used for the CelCradleTM System? | Yes  No | |
| 25. | | Can you adjust the CO2 concentration of incubator for CelCradleTM System? | Yes  No | |
| 26. | | What are the challenges / limitations you experience with your current system? |  | |
| 27. | | What is your expectation using CelCradleTM System? |  | |
| 28. | | Is there any changes required from your existing process protocol? | Yes  No | |
| 29. | | With Tide-motion bioreactor, is it okay to change the process protocol? | Yes  No | |