

Multiplex assay system

The instrument should have the following specifications:

1. Instrument should be based on xMAP technology for quantifying upto 100 different Protein and gene expression analytes from a single aliquot of sample (serum, tissue, cells, cell culture fluid, blood, plasma, different body fluids etc).
2. The instrument should support 96-well microplate based open system with multiplexing capabilities for different applications. The instrument should be able to perform Genomic assays in 96- and 384- well, hybridization-based assays that utilize a branched DNA technology for signal amplification for the direct quantitation of gene expression.
3. The instrument should be an open system and should support consumables from any manufacturer.
4. The instrument should be compatible with different form of microtitre plate like flat bottom, round bottom etc.
5. It should distinguish a minimum of 1 to a maximum of 100 unique xMAP microsphere sets in a single sample. The classification of microsphere should be more than 80% and misclassification of microspheres should be less than 3-5%.
6. Instrument should support different protocol and kits for bacterial and viral gene detection, and should be capable to provide custom gene expression panel up to 80 gene in single well.
7. The supplier should be able to provide and support custom designed panels, manufactured and validated for both genes as well as protein-based assays.
8. The company should provide 2 copies of each Protein and Gene expression off line analysis softwares
9. Company should provide option to develop new test / panel as customization of protein and gene expression with final product validation, perform QC without any additional charge.
10. The system should come with all kinds of maintenance and calibration kits like Verification/Calibration Kits etc. which are compulsory for ensuring proper functioning of the instrument.
11. Should be able to run/ provide low to mid Gene expression assays with maximum plex size of 80.
12. Should be able to run the assays that utilize xMAP beads for target capture and branched DNA (bDNA) technology for signal Amplification.
13. The instrument should be accompanied with testing kits to evaluate multiple cytokines (minimum 5 cytokines). The testing kits must contain minimum of 384 reactions.
14. The instrument should be provided with maintenance plates for calibration/validation/ verification etc. and maintenance procedure of the instrument.
15. The Supplier should be able to provide the consumables and or kits that can be used for quantitation of mRNA, Inc RNA, DNA and Telomeres.

16. The Supplier/ Vendor should be able to support and provide various kits for genomics as well as proteomics in areas of Stem Cell, Inflammation and Immunology, Epigenetics, hepatology, cancer signaling, Metabolism and Endocrinology, Autophagy and Apoptosis, Toxicity and Drug Metabolism.
17. Relevant technical notes / document must be attached stating the use and application of validation kit etc. as mentioned above.
18. The company should provide 1 plates of 64plex human cytokines, chemokines and growth factors kit for the screening of sample along with 1 kit of each verification and calibration kit.
19. The Supplier/Vendor should be able to support or provide various kits for proteomics as well as genomics in areas of immunology, vaccinology, infectious disease diagnosis, epigenetics, cancer biology, endocrinology, apoptosis, toxicity and drug metabolism pertaining to veterinary and animal sciences.
20. The optical specification of the instrument should be as follows:

Lasers

Reporter Laser: 532 nm

Classification Laser: 635 nm

Detector

Reporter channel detection: Photo multiplier tube

Classification channel detection: Avalanche photodiodes with temperature compensation.

- 21 The instrument should be accompanied by an open software platform for data acquisition, data analysis and maintenance of instrument.
The instrument should be provided with a computer system for software installation having 4GB RAM or more, minimum 500 GB hard disk/250 GB SSD, genuine windows 10 operating system of 64 bit, 2-3 USB ports(3.0 version), keyboard, mouse, and Intel core i7 or another upgraded processor.
21. The supplier should be able to provide and support custom designed panels, manufactured and validated for both genes as well as protein- based assays.
22. The Supplier/ Manufacturer should be able to support for Training / On-Site Demo for proteomics and genomics and subsequent data analysis.
23. There should be facility for post-sale service, service engineer and an instrument user list in North-east India and other national institute of India must be enclosed.
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