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NPTEL

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Courses » Applications of interactomics using Genomics and proteomics technologies

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Unit 5 - Week 4

Register for Certification exam

Course outline

How to access the portal

Week 1

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Week 3

Week 4

- Lecture 16 : Introduction to Bioprinting and Iris™ Optical QC Benefits-I
- Lecture 17 : Introduction to Bioprinting and Iris™ Optical QC Benefits-II
- Lecture 18 : Basics and Applications of Reverse Phase Protein Arrays-I
- Lecture 19 : Basics and Applications of Reverse Phase Protein Arrays-II
- Lecture 20 : Basics and

Assignment 4

The due date for submitting this assignment has passed.
As per our records you have not submitted this assignment. **Due on 2019-03-27, 23:59 IST.**

1) Which of the following statement(s) is/are TRUE in case of arrayjet printing technology? ***1 point***

1. HUPROT slides involve an arrayjet printing technology
2. Can print 640 features per second
3. Most of the printing is done by print head and not the pins
4. Cannot be used to prepare chips for epitope mapping

- 1, 2 and 3
- 2 and 3
- 1, 3 and 4
- Only 3

No, the answer is incorrect.
Score: 0

Accepted Answers:
1, 2 and 3

2) Which of the following is INCORRECT in case of JetSpyder? ***1 point***

- It is used to pick up samples before printing
- 3ul of samples is required for printing 75 slides
- It binds to the print head
- Set of 12 samples can be aspirated together

No, the answer is incorrect.
Score: 0

Accepted Answers:
3ul of samples is required for printing 75 slides

3) You are printing 100 microarray slides. How much time will you take (approximately) to print 12 samples on these slides using Arrayjet technology? ***1 point***

No, the answer is incorrect.
Score: 0

Accepted Answers:
2 minutes

4) Which of these can be used as substrates for printing? ***1 point***

- Planar surfaces
- Hydrogel slides
- Nanowell chips
- All of the above

No, the answer is incorrect.
Score: 0

Accepted Answers:
All of the above

5) Which if the following is INCORRECT in case of traditional microarraying? ***1 point***

- It involves use of pins
- They are usually affymetrix-based assays
- Has higher accuracy than bioprinting because print runs are slower
- They require high maintenance

No, the answer is incorrect.
Score: 0

Accepted Answers:
Has higher accuracy than bioprinting because print runs are slower

6) Which of the following you may NOT require for printing a slide using Arrayjet technology? ***1 point***

- Glycerol buffer
- Slides
- Scanner
- JetSpyder

No, the answer is incorrect.
Score: 0

Accepted Answers:
Scanner

7) You want to perform a Reverse phase protein array experiment for targeted analysis of cellular proteomes. Here are the list of reagents and equipment you already have: (Tissue lysates, Lysis and extraction buffers, Wash and dilution buffers, Protein arrayer, Antibodies and Microarray scanner). Which of the following do you still need to perform your experiment? ***1 point***

1. Stain like SyproRuby for protein staining
2. 384 well plates
3. Bradford reagent/nanodrop
4. Western blotting apparatus and reagents

- 1, 2 and 4
- 2 and 3
- 1, 2 and 3
- All of the above

No, the answer is incorrect.
Score: 0

Accepted Answers:
All of the above

8) Which of the following is INCORRECT in case of reverse phase protein arrays (RPPA) ***1 point***

- It does not involve cell-free expression
- Samples are probed over a slide spotted with purified proteins
- It is compatible with many detection techniques
- Lysis buffer chosen can interfere with visualization of signals

No, the answer is incorrect.
Score: 0

Accepted Answers:
Samples are probed over a slide spotted with purified proteins

9) Antibody validation in case of RPPA involves the following steps in which order? ***1 point***

1. Western blot using multiple lysates
2. Knock down experiments
3. Western blot using pooled lysates of interest
4. Serial dilution of pooled lysates and RPPA validation

- 1-3-2-4
- 3-1-2-4
- 2-3-1-4
- 3-2-1-4

No, the answer is incorrect.
Score: 0

Accepted Answers:
1-3-2-4

10) Which of the following normalization methods is not ideal for RPPA data? ***1 point***

- Global median centering
- Quantile
- Super curve
- Variable slope

No, the answer is incorrect.
Score: 0

Accepted Answers:
Quantile

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