Affinity Chromatography MCQ

1. Affinity chromatography separation is based on
a) specific interaction between the analyte and the ligand
b) the flow-through time of the analyte
c) the duration of the analyte
d) molecular weights

Answer: a

2. A pull down affinity chromatography assay is used for the investigation of
a) folding of denatured proteins
b) protein-protein interactions
c) adjustment of protein charges
d) detection of bait proteins

Answer: b

3. The first step in preparation of affinity chromatography column is _____________
a) ligand attachment to matrix
b) coupling of aromatic amines to matrix
c) activation process
d) precipitation

Answer: c

4. __________ refers to eluting a compound by creating a competition between the bounded enzymes with its suitable complimentary protein in solution.
a) Specific elution
b) Nonspecific elution
c) Filtration
d) Dialysis

Answer: a

5. Which among these is not a way of non-specific elution?
a) Solvent change
b) pH change
c) Reversible denaturation
d) Competition to suitable complementary protein

Answer: d
6. Acetylcholine esterase can be purified by using affinity chromatography with the use of ______ as a ligand.
   a) ATP
   b) NADP
   c) Acridinium
   d) Con A
   Answer: c

7. Acid phosphatase: Mannose:: Alpha amylase: ______________
   a) KCl
   b) Glycogen
   c) Adenosine
   d) Methyl-D-mannoside
   Answer: b

8. The chromatographic method of separating biochemical mixture of compounds, based on highly specific biological interactions is referred to as ______________
   a) thin layer chromatography
   b) ion-exchange chromatography
   c) affinity chromatography
   d) gel permeation chromatography
   Answer: c

9. Which of the following is not a highly specific biological interaction to be used in affinity chromatography?
   a) Cations-anions
   b) Antigen-antibody
   c) Enzyme-substrate
   d) Receptor-ligand
   Answer: a

10. Which of this is not true while selecting a solid matrix or column during affinity chromatography?
    a) The matrix should interact weakly with enzymes
    b) The matrix should be based on inorganic compounds
    c) The matrix should exhibit good flow property
    d) The matrix should be highly porous
    Answer: b
11. Requirements for affinity chromatography
   a) possibility to attach the ligand to the stationary phase
   b) degradability of the analyte
   c) ligand affinity to the sample matrix
   d) availability of high molecular weight ligand

   Answer: a

12. Affinity Chromatography can be used for
   a) the separation of proteins according to their isoelectric points
   b) the concentration of a compound
   c) the purification of compounds from a complex matrix
   d) the determination of protein molecular weights

   Answer: b