What is claimed is:

1. A method for characterizing ~~a protein~~an antibody-drug conjugate, said method comprising:

contacting a sample including the ~~protein~~antibody-drug conjugate to a chromatographic system having a size-exclusion chromatography resin;

washing said size-exclusion chromatography resin using a mobile phase to provide an eluent including the ~~protein~~antibody-drug conjugate; and

characterizing the antibody-drug conjugate~~protein~~ in said eluent using an electrospray ionization mass spectrometer under native conditions.

2. The method of claim 1, wherein the electrospray ionization mass spectrometer is coupled to the chromatographic system having the size-exclusion chromatography resin~~.~~, or wherein the electrospray ionization mass spectrometer is coupled online to the chromatographic system having the size-exclusion chromatography resin.

3. The method of claim 1, wherein the electrospray ionization mass spectrometer is a nano-electrospray ionization mass spectrometer.

4. The method of claim 1, wherein at least one three way-splitter is used to couple the electrospray ionization mass spectrometer to the chromatographic system having the size-exclusion chromatography resin.

5. The method of claim 1, wherein at least one three way-splitter is used to couple an ultraviolet detector to the chromatographic system having the size-exclusion chromatography resin.

6. The method of claim 5, wherein the eluent from washing the size-exclusion chromatography resin is introduced in the ultraviolet detector through the at least one three way-splitter at a flow rate of ~~about~~ 0.2 mL/min to ~~about~~ 0.4 mL/min.

7. The method of claim 1, wherein the mobile phase used to wash the size-exclusion chromatography resin comprises ammonium acetate.

8. The method of claim 1, wherein the mobile phase used to wash the size-exclusion chromatography resin comprises a volatile salt.

9. The method of claim 1, wherein the mobile phase used to wash the size-exclusion chromatography resin has a total volatile salt concentration of ~~about~~ 100 mM.

10. The method of claim 1, wherein the mobile phase used to wash the size-exclusion chromatography resin has a flow rate of ~~about~~ 0.2 mL/min to ~~about~~ 0.4 mL/min.

11. The method of claim 1, wherein the mobile phase used to wash the size-exclusion chromatography resin has a pH of about 6.8.

12. The method of claim 1, wherein an amount of the sample including the ~~protein~~antibody-drug conjugate contacted to the chromatography system is ~~about~~ 10 µg to ~~about~~ 100 µg.

13. The method of claim 1, wherein the ~~protein is an antibody.~~

~~14. The method of claim 1, wherein the protein is a monoclonal antibody.~~

~~15. The method of claim 1, wherein the protein is a therapeutic antibody.~~

~~16. The method of claim 1, wherein the protein is an antigen-antibody complex.~~

~~17. The method of claim 1, wherein the protein comprises an antibody included in an antibody-drug conjugate.~~

~~18. The method of claim 1, wherein the eluent provided from washing the size-exclusion chromatography resin is introduced in the electrospray ionization mass spectrometer at a flow rate of less than about 50 µl/min.~~

~~19. The method of claim 1, wherein the eluent provided from washing the size-exclusion chromatography resin is introduced in the electrospray ionization mass spectrometer, wherein a flow rate of electrospray from the electrospray ionization is about 10 nL/min to about 50 nL/min.~~

~~20. The method of claim 1, wherein the eluent provided from washing the size-exclusion chromatography resin is introduced in the electrospray ionization mass spectrometer, wherein a spray voltage of electrospray is about 0.8 kV to about 1.5 kV.~~

~~21. A method for characterizing an antibody-drug conjugate, said method comprising:~~

~~contacting a sample including the antibody-drug conjugate to a chromatographic system having a size-exclusion chromatography resin;~~

~~washing said size-exclusion chromatography resin using a mobile phase to provide an eluent including the antibody-drug conjugate; and~~

~~characterizing the antibody-drug conjugate in said eluent using an electrospray ionization mass spectrometer under native conditions.~~

~~22. The method of claim 21, wherein the~~ antibody-drug conjugate is an engineered cysteine-based antibody-drug conjugate.

~~23~~14. The method of claim ~~21~~1, wherein the antibody-drug conjugate is a non-specific cysteine-based antibody-drug conjugate.

~~24~~15. The method of claim ~~21~~1, wherein characterizing the antibody-drug conjugate comprises characterizing drug to antibody ratio.

~~25. A method for identifying a protein, said method comprising:~~

~~contacting a sample including the protein to a chromatographic system having a size-exclusion chromatography resin;~~

~~washing said size-exclusion chromatography resin using a mobile phase to provide an eluent including the protein; and~~

~~characterizing the protein in said eluent using an electrospray ionization mass spectrometer under native conditions.~~

~~26. A method for quantifying a protein, said method comprising:~~

~~contacting a sample including the protein to a chromatographic system having a size-exclusion chromatography resin;~~

~~washing said size-exclusion chromatography resin using a mobile phase to provide an eluent including the protein; and~~

characterizing the protein in said eluent using an electrospray ionization mass spectrometer under native conditions.

27. A system comprising:

a chromatographic column having a size-exclusion chromatography resin, wherein the chromatographic column is capable of receiving a mobile phase and a sample including a protein, and

an electrospray ionization mass spectrometer, wherein the electrospray ionization mass spectrometer is capable of being coupled to said chromatographic column and wherein the electrospray ionization mass spectrometer is capable of being run under native conditions.

28. The system of claim 27, wherein the system is capable of characterizing drug to antibody ratio of an antibody-drug conjugate.

29. The system of claim 27, wherein the chromatographic column is capable of being coupled to the mass spectrometer using a T-splitter.

30. The system of claim 27, wherein the chromatographic column is further capable of being coupled to an ultraviolet detector using a T-splitter.

31. The system of claim 27, wherein the electrospray ionization mass spectrometer is a nano-electrospray ionization mass spectrometer.

32. A method for characterizing a protein, said method comprising:

contacting a sample including the protein to a chromatographic system having a chromatography resin;

washing said chromatographic resin using a mobile phase to provide an eluent including the protein; and

characterizing the protein in said eluent using an electrospray ionization mass spectrometer under native conditions.

33. The method of claim 32, wherein the chromatographic resin is selected from a group consisting of affinity chromatography resin, anion-exchange resin, cation exchange resin,

~~affinity resin, mixed mode chromatography resin, hydrophobic interaction chromatography resin or size exclusion chromatography resin.~~

~~34. The method of claim 32, wherein the chromatographic system is selected from reversed-phased (RP), ion exchange (IEX) or normal phase chromatography (NP).~~