

CLAIMS

1. A method for mitigating drug target interference in an anti-drug antibody (ADA) bridging immunoassay for the determination of the presence of an ADA against a drug in a serum sample, comprising
 contacting the serum sample with
 a capture drug labelled with a first label;
 a detection drug labelled with a second label; and
 a drug target blocking reagent; and
 a second drug target blocking reagent;
 incubating the serum sample, under mild basic pH assay conditions of pH 7.5 – pH 9.5, with the capture drug, the detection drug, and the drug target blocking reagent, and the second drug target blocking reagent,
 and allowing the drug target blocking reagent and the second drug target blocking reagent to bind to the drug target present in the sample,
 thereby mitigating the interference of the drug target in the ADA bridging immunoassay.
2. The method of claim 1, further comprising performing the anti-drug antibody (ADA) bridging immunoassay.
3. The method of claim 1, wherein the drug target blocking reagent is a drug target blocking antibody.
4. The method of claim 1, wherein the drug target is a soluble protein such as, *e.g.*, a ligand to a receptor.
5. The method of claim 4, wherein the drug target blocking reagent comprises a portion of the receptor fused to an IgG Fc domain.
6. The method of claim 5, wherein the portion of the receptor is an extracellular portion of the receptor.

7. The method of claim 5, wherein the IgG Fc domain is a mouse IgG Fc domain.
8. The method of claim 5, wherein the IgG Fc domain is a human IgG Fc domain.
9. The method of claim 1, wherein the second drug target blocking reagent is a drug target blocking antibody.
10. The method of claim 9, wherein the second drug target blocking antibody comprises a mouse constant region.
11. The method of claim 1, wherein the drug is a human therapeutic monoclonal antibody.
12. The method of claim 1, wherein the drug is a humanized therapeutic monoclonal antibody.
13. The method of claims 11 or 12, wherein the human or humanized therapeutic monoclonal antibody is being evaluated in a clinical trial.
14. The method of claim 1, wherein the drug target is a soluble or shed multimeric drug target.
15. The method of claim 1, wherein the drug target is a homodimeric drug target.
16. The method of claim 1, wherein the mild basic pH assay conditions comprise conditions of a pH between 8.3 to 8.9.
17. The method of claim 16, wherein the mild basic pH assay conditions comprise conditions of a pH of 8.3.
18. The method of claim 16, wherein the mild basic pH assay conditions comprise conditions of a pH of 8.9.

19. The method of any of the preceding claims, wherein the serum sample is a human serum sample.
20. The method of any of the preceding claims, wherein the serum sample is from a subject being treated with the drug.
21. The method of claim 1, wherein the incubating is done at room temperature.
22. The method of claim 1, wherein the anti-drug antibody (ADA) bridging immunoassay is a high-throughput assay.
23. The method of claim 1, wherein the capture drug is attached to a solid surface.
24. The method of claim 23, wherein the solid surface is a microtiter plate.
25. The method of claim 23, wherein the solid surface is a coated with streptavidin.
26. The method of claim 1, wherein the capture label is selected from the group consisting of a biotin label, a Protein A label, a Protein G label, and a glutathionine S-transferase (GST) label.
27. The method of claim 1, wherein the second label is selected from the group consisting of a ruthenium label, a radiologic label, a photoluminescent label, a chemiluminescent label, a fluorescent label, an electrochemiluminescent label, and an enzyme label.
28. A method for mitigating drug target interference in an anti-drug antibody (ADA) bridging immunoassay for the determination of the presence of an ADA against a drug in a serum sample, comprising
 - contacting the serum sample with
 - a capture drug labelled with a first label;
 - a detection drug labelled with a second label;

a first drug target blocking antibody; and
a second drug target blocking antibody,
incubating, under mild basic pH assay conditions of pH 7.5 – pH 9.5, the capture drug,
the detection drug, the first drug target blocking antibody, and the second drug target blocking
antibody,
and allowing the first drug target blocking antibody and the second drug target
blocking antibody to bind to the drug target present in the sample,
thereby mitigating the interference of the drug target in the ADA bridging
immunoassay.

29. A method for mitigating drug target interference in an anti-drug antibody (ADA)
bridging immunoassay for the determination of the presence of an ADA against a drug in a
serum sample, wherein the drug target is a soluble protein, the method comprising
contacting the serum sample with
a capture drug labelled with a first label;
a detection drug labelled with a second label;
a drug target blocking reagent comprising an extracellular portion of the
receptor fused to an IgG Fc domain; and
a drug target blocking antibody,
incubating, under mild basic pH assay conditions of pH 7.5 – pH 9.5, the capture drug,
the detection drug, the drug target blocking reagent, and the drug target blocking antibody,
and allowing the drug target blocking reagent and the drug target blocking antibody to
bind to the drug target present in the sample,
thereby mitigating the interference of the drug target in the ADA bridging
immunoassay.