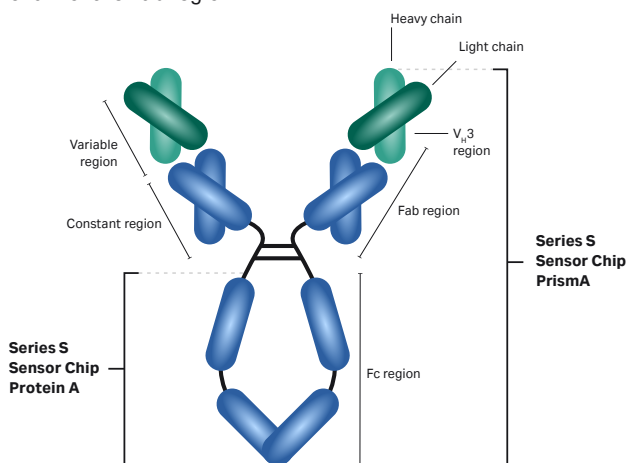


Biacore™ Series S Sensor Chip Prisma

FAQs

- 1. What is Series S Sensor Chip Prisma?** It's a pre-functionalized ready-to-use sensor chip with the Prisma ligand coupled to the same carboxymethylated dextran surface that's used for Series S Sensor Chip CM5.
- 2. When should I use Series S Sensor Chip Prisma?** Use it for concentration analysis and yes/no screening of human IgG antibodies in biopharmaceutical process development, manufacturing, and quality control. It offers the convenience of a high-capacity pre-functionalized sensor chip and provides a large dynamic range, high stability, and low lot-to-lot variation.
- 3. What is the Prisma ligand?** Prisma is a genetically engineered protein A-derived ligand. It's the same ligand that's used in MabSelect Prisma™ resin and Fibro Prisma fiber-based chromatography products.
- 4. What part of human IgG does the Prisma ligand bind to?** Binding to human IgG mainly takes place between constant heavy chain domains, C_H2 and C_H3, in the Fc region of the monoclonal antibody (mAb). Compared to Series S Sensor Chip Protein A, Series S Sensor Chip Prisma has enhanced binding affinity for the V_H3 sequence located on the variable heavy chain of the Fab region.



- 5. What's the difference between the MabSelect Prisma™ ligand and the MabSelect SuRe™ ligand?** MabSelect Prisma™ is based on protein A and the Z-domain and has a natural interaction with the Fc domain of IgG₁, IgG₂ and IgG₄. The Prisma ligand binds to the Fc domain of these subtypes, but it also has a strong interaction to the Fab domain and V_H3 class antibodies that the MabSelect SuRe™ ligand, used for Series S Sensor Chip Protein A, lacks. However, there's a large sequence variation within the V_H3 class, and the Prisma ligand only binds V_H3 with a specific set of amino acids.

- 6. In what format is new Sensor Chip Prisma available?** It's only available in the Series S format.
- 7. Can I use Series S Sensor Chip Prisma on all Biacore™ instruments?** You can use it in Biacore™ 8K, Biacore™ 8K+, Biacore™ T200, and Biacore™ S200 surface plasmon resonance (SPR) systems.
- 8. What running buffers can I use?** You can use any of Cytiva's Biacore™ running buffers.
- 9. What is the analyte capacity of Series S Sensor Chip Prisma compared to Series S Sensor Chip Protein A?** The analyte capacities are comparable.
- 10. What are the pack sizes?** It's available in packs of one and three sensor chips.
- 11. At what temperatures can I use Series S Sensor Chip Prisma?** It's designed for analyses at 25°C. We haven't tested other temperatures.
- 12. Are there any special surface conditioning requirements for Series S Sensor Chip Prisma?** No, surface conditioning isn't required.
- 13. How many start-up cycles do I normally need on Series S Sensor Chip Prisma?** We recommend one to three start-up cycles. Run them in the same way as the analyte cycles, including regeneration. You can use a running buffer instead of analyte.
- 14. What do you recommend for regeneration?** We recommend a 60 s injection of 10 mM glycine-HCl, pH 1.5. You can also use a 120 s injection of 50 mM NaOH. Cytiva offers both regeneration solutions as ready-to-use products.
- 15. Why do I see a slight change in sensorgram baseline between cycles?** This slight change is common and doesn't impair assay performance for this method setup.
- 16. Sometimes spots are visible on the sensor chip surface. What is that?** If the spots look similar to white mold, they come from the stabilizing solution used to manufacture the sensor chips. They don't impact assay performance or instrument function. To protect the sensor chip from dust particles, we recommend always keeping it fully inserted into the cover.
- 17. How should I store the sensor chip before I dock it into my Biacore™ SPR instrument?** Store it in the refrigerator in an unopened pouch.
- 18. Can I store and reuse a previously docked chip?** We haven't investigated storing them after use in the instrument.

19. Can I run kinetic characterization on Series S Sensor Chip Prisma? We don't recommend it; instead, use Series S Sensor Chip Protein A. In contrast to the MabSelect SuRe™ ligand on Series S Sensor Chip Protein A, which primarily interacts with the Fc region, the Prisma ligand interacts with both Fc and V_H3 regions. In some instances, this may influence calculated kinetic constants. We don't recommend using the sensor chip for kinetic analysis due to the additional binding to the heavy chain on the Fab region.

20. Can I use Series S Sensor Chip Prisma for epitope binning studies? We don't recommend it, because the very high capacity makes it difficult to completely block the sensor surface.

21. How do I set up and optimize my concentration assay?
See our application guide [Concentration measurements with Biacore™ system](#).

22. What should I consider when preparing mAb samples in cell cultures for concentration analysis? Samples from upstream processes are very dense and contain a high concentration of product. This may give rise to nonspecific binding, which can be reduced by dilution. The exact dilution factor required will depend on the nature of your cell culture, but we recommend a minimum of 1:10 dilution.

23. What should I consider when preparing mAb samples from chromatography elution for concentration analysis?
Eluted samples from chromatography often have high ionic strength and/or low pH, both of which can interfere with binding. To restore optimal binding conditions, dilute samples at least 10-fold in running buffer.

24. How frequently should I run the calibration curve in my concentration assay? This depends on the assay. For general guidelines on how to design your concentration assay refer to our application guide [Concentration measurements with Biacore™ systems](#).

25. How do I know when to use Series S Sensor Chip Protein A, Series S Sensor Chip Prisma, Human Capture Kit, or Mouse Antibody Capture Kit?

- Use Series S Sensor Chip Prisma for concentration analysis when the high convenience of a ready-made sensor chip is a priority. It's also suitable when you want to use the same Prisma ligand that's on Cytiva's purification products. The Prisma ligand binds antibodies from mammalian species, including human, in subclasses IgG₁, IgG₂, and IgG₄. It binds on the heavy chain on both Fc and Fab regions.
- Use Series S Sensor Chip Protein A for concentration and kinetic analysis when the high convenience of a ready-made sensor chip is a priority. It's also suitable when you want to use the same MabSelect SuRe™ ligand that's on Cytiva's purification products. The ligand binds antibodies from mammalian species, including human, in subclasses IgG₁, IgG₂, IgG₄. It binds on the heavy chain on the Fc region.
- Human Antibody Capture Kit has a monoclonal anti-human IgG antibody as capture reagent. Use it for concentration and kinetic analysis and other applications where you need to control the surface capacity or when antibodies/IgG samples contain fetal calf serum. Unlike Sensor Chip Protein A and Series S Sensor Chip Prisma, the antibody in this kit also captures human IgG₃.
- Mouse Antibody Capture Kit has a polyclonal anti-mouse Ig antibody as capture reagent. Use it for concentration and kinetic analysis and other applications where you need to control the surface capacity. Unlike Series S Sensor Chip Protein A and Series S Sensor Chip Prisma, the antibody in this kit also captures mouse IgG₁.

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