

Carterra Sensor Chip Descriptions

Selection of the appropriate sensor chip surface is essential for robust data quality when designing a high-throughput SPR assay. Carterra offers a broad range of chip surfaces to support the diverse applications available on the LSA®, LSA^{XT}, Ultra, and Vega instruments. Described here are the standard chip offerings. Custom surfaces may be available upon request. Always consult with a Carterra Applications Scientist when selecting sensor chips.

Couple

Linear polycarboxylate

Name	Description	Application
HC30M	Polycarboxylate hydrogel, medium charge density, 30nm coating thickness	Moderate ligand capacity and excellent diffusion characteristics
HC200M	Polycarboxylate hydrogel, medium charge density, 200nm coating thickness	Higher ligand capacity for increased levels of immobilization

Carboxymethylated dextran

Name	Description	Application
CMDP	2D planar carboxymethyl dextran surface, <5nm coating thickness	Lower ligand capacity and excellent diffusion characteristics
CMD50M	Carboxymethyl dextran hydrogel, medium charge density, 50nm coating thickness	Moderate ligand capacity and improved diffusion characteristics
CMD200M	Carboxymethyl dextran hydrogel, medium charge density, 200nm coating thickness	Higher ligand capacity for increased levels of immobilization
CMD500M	Carboxymethyl dextran hydrogel, medium charge density, 500nm coating thickness	Higher ligand capacity for maximum levels of immobilization

NiNTA

Name	Description	Application
NiCMDP	Planar NTA derivatized carboxymethyl dextran, < 5nm coating thickness	Very low capacity capture of His-tagged molecules
NiHC200M	Poly - NTA derivatized linear polycarboxylate hydrogel, medium charge density, 200nm coating thickness	High capacity for His-tagged ligand applications

Capture

Streptavidin

Name	Description	Application
SAP	Streptavidin immobilized on 2D planar carboxymethyl dextran surface, <5nm coating thickness	Very low capacity for arraying of biotinylated ligands
SAHC30M	Streptavidin, immobilized in polycarboxylate hydrogel, medium charge density, 30nm coating thickness	Lower capacity for biotinylated ligand kinetic lawns
SAD200M	Streptavidin, immobilized in a carboxymethyl dextran hydrogel, medium charge density, 200nm coating thickness	High capacity for biotinylated ligand applications
RSA200M KIT	Oligonucleotide derivatized carboxymethyl dextran for reversible immobilization of biotinylated ligands, 200nm coating thickness. RSA reagent included.	Medium capacity reversible capture of biotinylated molecules

Protein A

Name	Description	Application
PAHC200M	Protein A derivatized linear polycarboxylate hydrogel, medium charge density, 200nm coating thickness	High capacity for quantitation of human IgG

Protein A/G

Name	Description	Application
PAGP	Planar protein A/G derivatized carboxymethyl dextran, < 5nm coating thickness	Very low capacity capture of Fc-containing molecules
PAGHC30M	Protein A/G derivatized linear polycarboxylate hydrogel, medium charge density, 30nm coating thickness	High capacity for quantitation of multi-species IgG
PAGHC200M	Protein A derivatized linear polycarboxylate hydrogel, medium charge density, 200nm coating thickness	High capacity for quantitation

- NOTE: While CMD is a well described chemistry for use in biosensors, the linear polycarboxylate chemistry of HC chips provides an alternate surface chemistry to that of CMD in instances of non-specific binding or when differential diffusion characteristics are warranted. When stored at -20 °C CMD and HC surfaces are good for 4 years after purchase, while protein derivatized coatings such as SAD should be used within 2 years.

Carterra technology is protected by the following patents and other patents pending:
8,210,119, 8,211,382, 8,383,059, 8,999,726, 9,682,372, 9,682,396, 10,825,548

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questions@carterra-bio.com

Headquarters:
825 N 300 W Suite C309
Salt Lake City, UT 84103

www.carterra-bio.com