Octet® SPR Sensor Chip Selection Guide
<table>
<thead>
<tr>
<th>Sensor Chip</th>
<th>Part no.</th>
<th>Surface chemistry</th>
<th>Capacity</th>
<th>Immobilization method</th>
<th>Recommended use</th>
<th>Advantages</th>
</tr>
</thead>
</table>
| COOH1       | 19-0053 | Planar carboxylated oligoethylene oxide | Low     | Amine coupling        | Protein–protein or other large molecule kinetic assays when lectin binding may occur, or dextran alternative is desired. | • Immobilization of targets without derivatization or tags  
• Produces a highly stable covalent bond  
• Can be used to immobilize affinity ligands to create additional capture chemistries (i.e. Protein A, antibodies, etc.)  
• Effective over a wide pH range |
| CDL         | 19-0127 | Thin, low density carboxymethyl dextran layer | Medium  | Amine coupling        | Measuring accurate kinetics of protein–protein or other intermediate (>1 kDa) to large (>25 kDa) molecule interactions. | • Immobilization of targets without derivatization or tags  
• Biocompatible with a range of molecules  
• Produces a highly stable covalent bond  
• Can be used to immobilize affinity ligands to create additional capture chemistries (i.e. Protein A, antibodies, etc.)  
• Effective over a wide pH range |
| CDH         | 19-0128 | Carboxymethyl dextran three-dimensional hydrogel surface with carboxylic acids | High    | Amine coupling        | Small molecule–protein interactions, fragment screening, or other target interactions with low binding activity. Assays where high capacity is needed. | • Immobilization of targets without derivatization or tags  
• High-capacity carboxymethyl dextran surface, ideal for immobilizing a large amount of target for small molecule and fragment analysis  
• Biocompatible with a wide range of molecules  
• Produces a highly stable covalent bond  
• Effective over a wide pH range |
| PCH         | 19-0129 | Non-dextran polycarboxylate hydrogel surface | High+   | Amine coupling        | Small molecule (<1 kDa)-protein interactions, fragment screening, or other target interactions with low binding activity. Assays where high capacity is needed and/or dextran alternative is desired. | • Immobilization of targets without derivatization or tags  
• Highest capacity surface, ideal for immobilizing targets for small molecule and fragment analysis  
• Provides an alternative to dextran surface  
• Produces a highly stable covalent bond  
• Effective over a wide pH range |
| HisCap      | 19-0058 | Non-dextran polysaccharide three-dimensional surface with carboxylic acids pre-immobilized nitrilotriacetic acid (NTA), regenerable with imidazole, EDTA | High    | Capture via His tag   | Small molecule or peptide kinetics with His-tagged protein ligands. Large molecule kinetic assays with His-tagged proteins. | • High ligand capture capacity for low molecular weight analytes such as fragments  
• Stable baseline, important for accurate kinetic analysis  
• Provides a convenient means of directed capture of His-tagged proteins  
• Can be regenerated using a variety of conditions, such as imidazole, SDS, or EDTA  
• Suitable alternative for proteins that are not amenable to amine coupling |
| SADH        | 19-0130 | Streptavidin immobilized in three-dimensional carboxymethyl dextran hydrogel | Medium-High | Capture via biotin | Intermediate (>1 kDa) to large (>25 kDa) molecule kinetics with biotinylated ligands. | • Highly efficient capture over a wide pH range  
• Requires low quantities of ligand (nanomolar concentrations)  
• Single step capture  
• Surface has lower electrostatic charge compared to amine coupling sensors |