

**LEAN  
& MEAN**

Label-free  
Biomolecular  
Interaction  
Analysis



**EXPERIENCE THE DIFFERENCE.**



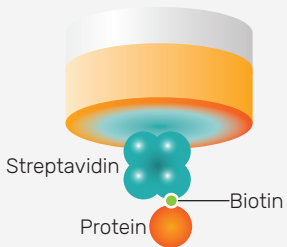
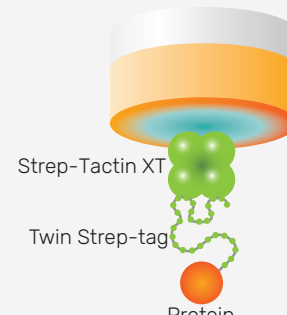
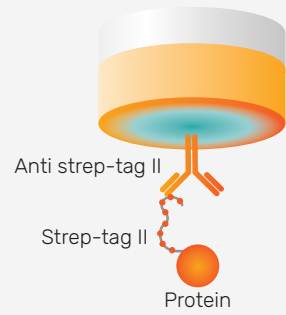
Application Note

**Biosensor selection for proteins tagged  
with Strep-tag<sup>®</sup>II and Twin-Strep-tag<sup>®</sup>**



# Biosensor selection for proteins tagged with Strep-tag<sup>®</sup>II and Twin-Strep-tag<sup>®</sup>

**Introduction:** Proteins are purified using different types of tags. This guide makes recommendations on selection of right BLI biosensors for quantitation and kinetic analysis of tagged proteins.

Streptavidin Probe	Strep-Tactin XT Probe	Custom Anti Strep-tag II probe
Optimized for biotinylated and Avi tagged proteins.	Optimized for proteins tagged with Twin-Strep-tag <sup>®</sup> : Trp-Ser-His-Pro-Gln-Phe-Glu-Lys-(GGGS) <sub>2</sub> -GGSA--Trp-Ser-His-Pro-Gln-Phe-Glu-Lys	Optimized for proteins tagged with Strep-tag <sup>®</sup> II: Trp-Ser-His-Pro-Gln-Phe-Glu-Lys
		
<ul style="list-style-type: none"> <li>✓ Biotinylated proteins</li> <li>✗ Twin-Strep-tag fusion proteins</li> <li>✗ Strep-tag-II fusion proteins</li> </ul>	<ul style="list-style-type: none"> <li>✗ Biotinylated proteins</li> <li>✓ Twin-Strep-tag fusion proteins</li> <li>✗ Strep-tag-II fusion proteins</li> </ul>	<ul style="list-style-type: none"> <li>✗ Biotinylated proteins</li> <li>✗ Twin-Strep-tag fusion proteins</li> <li>✓ Strep-tag-II fusion proteins</li> </ul>

Biosensor	Ligand	Target analyte	Affinity
Strep-Tactin XT	Strep-Tactin <sup>®</sup> XT	Twin Strep-tag fusion proteins	Low pM affinity
Custom Anti strep-tag II	Anti strep-tag II antibody	Strep-tag II fusion proteins	Low nM affinity
SA Probes	Streptavidin	Biotinylated proteins	fM affinity

Note: Streptavidin sensors that are used with biotinylated biomolecules are not suitable for use with Twin-Strep-tag and Strep-tag II fusion proteins. Even though Strep-Tactin has been engineered from Streptavidin, streptavidin itself has a very weak binding to Twin-Strep-tag and Strep-tag II ( $\mu$ M affinity) making it unsuitable for BLI analysis.

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