Z-domain of protein A scaffold protein anti-Staphylococcus aureus Protein A

Cat. No.: SZA-L237
This product is for research use only and is not intended for diagnostic use.

PRODUCT INFORMATION

Product Overview
This protein A specific binding protein (Z-domain of protein A) was investigated by an α-helix shuffling strategy. The primary scaffold protein was from a naive combinatorial library of the three-helix bundle Z domain derived from staphylococcal protein A. A hierarchical library was constructed through selective re-randomization of six amino acid positions in one of the two α-helices of the domain, making up the Taq DNA polymerase binding surface. After selections using monovalent phage display technology, second generation variants were identified having affinities (KD=20 nM) for protein A as determined by biosensor technology. It's potential to be used in diagnostic, research and therapeutic applications.

Scaffold Name
Z-domain of protein A

Origin
Staphylococcal protein A

Core Structure
3-α helixes

Variable Regions
13 Residues on first and second helix surface

Target
Protein A

Species Reactivity
Staphylococcus aureus

Expression Host
E. coli

Affinity Constant
20 nM

Applications
ELISA; IHC; Microscopy; FC; WB; FuncS

TARGET INFORMATION

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Introduction

Protein A is a 42 kDa surface protein originally found in the cell wall of the bacterium Staphylococcus aureus. It is encoded by the spa gene and its regulation is controlled by DNA topology, cellular osmolarity, and a two-component system called ArlS-ArlR.

<table>
<thead>
<tr>
<th>Alternative Names</th>
<th>Staphylococcal protein A; Z-domain of protein A; repA; replication initiator protein A; protein A</th>
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</thead>
<tbody>
<tr>
<td>Gene ID</td>
<td>17363263</td>
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<tr>
<td>UniProt ID</td>
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