

VACCINE CONSTRUCTS AND USES THEREOF AGAINST *STAPHYLOCOCCUS* INFECTIONS**ABSTRACT**

There is provided a fusion construct of formula (I): X-A-linker-B-Z (I) wherein : (1) A and B are identical or different and are independently: (a) a polypeptide comprising a SACOL0029 polypeptide as set forth in any one of the sequences depicted in FIG. 24 (SEQ ID NOs: 5 and 121 to 131), a SACOL0264 polypeptide (SEQ ID NO : 185), a SACOL0442 polypeptide as set forth in any one of the sequences depicted in FIG. 22D (SEQ ID NOs: 29 and 82 to 92), a SACOL0718 polypeptide (SEQ ID NO : 186), a SACOL0720 polypeptide as set forth in any one of the sequences depicted in FIGs. 23I-J (SEQ ID NOs: 11 and 109 to 120), a SACOL1353 polypeptide (SEQ ID NO : 187), a SACOL1416 polypeptide (SEQ ID NO : 188), a SACOL1611 polypeptide (SEQ ID NO : 189), a SACOL1867 polypeptide as set forth in any one of the sequences depicted in FIG. 25D (SEQ ID NOs: 152 to 164), a SACOL1912 polypeptide (SEQ ID NO : 43), a SACOL1944 polypeptide (SEQ ID NO : 190), a SACOL2144 polypeptide (SEQ ID NO : 191), a SACOL2365 polypeptide (SEQ ID NO : 192), a SACOL2385 polypeptide (SEQ ID NO : 50) or a SACOL2599 polypeptide (SEQ ID NO : 193), based on the gene nomenclature from the *Staphylococcus aureus* COL (SACOL) genome set forth in NCBI Reference Sequence NC_002951.2; (b) a polypeptide encoded by a gene from a same operon as a gene encoding the polypeptide of (a); (c) a polypeptide comprising an immunogenic fragment of at least 13 consecutive amino acids of (a) or (b); (d) a polypeptide comprising an amino acid sequence at least 60% identical overall to the sequence of the polypeptide of any one of (a) to (c); or (e) a polypeptide comprising an immunogenic variant comprising at least 13 consecutive amino acids of any one of (a) to (c); (2) the linker is an amino acid sequence of at least one amino acid or is absent; (3) X is absent or is an amino acid sequence of at least one amino acid; and (4) Z is absent or is an amino acid sequence of at least one amino acid. Also provided are compositions and kits comprising the fusion and uses of these fusions, compositions and kits.

No suitable figure