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(54) **Title:** A NOVEL ENGINEERED SUPERANTIGEN FOR HUMAN THERAPY

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                                                    A                   B
SEQ ID NO: 2  SEA/E-120     SEKSEEINEKDLRKKSELQGTALGNLKQIYYYNSKAITSSEKSADQFLTNTLLFKGFFTG 60
SEQ ID NO: 3  SEA/E-18      SEKSEEINEKDLRKKSELQGTALGNLKQIYYYNEKAITENKESDDQFLENTLLFKGFFTG 60
SEQ ID NO: 7  SEE           SEKSEEINEKDLRKKSELQRNALSNLRQIYYYNEKAITENKESDDQFLENTLLFKGFFTG 60
SEQ ID NO: 4  SEA           SEKSEEINEKDLRKKSELQGTALGNLKQIYYYNEKAKTENKESHDQFLQHTILFKGFFTD 60
                            ****************** .**.**:******.** *..::* **** :*:*******.
                                                C
              SEA/E-120     HPWYNDLLVDLGSTAATSEYEGSSVDLYGAYYGYQCAGGTPNKTACMYGGVTLHDNNRLT 120
              SEA/E-18      HPWYNDLLVDLGSKDATNKYKGKKVDLYGAYYGYQCAGGTPNKTACMYGGVTLHDNNRLT 120
              SEE           HPWYNDLLVDLGSKDATNKYKGKKVDLYGAYYGYQCAGGTPNKTACMYGGVTLHDNNRLT 120
              SEA           HSWYNDLLVDFDSKDIVDKYKGKKVDLYGAYYGYQCAGGTPNKTACMYGGVTLHDNNRLT 120
                            *.*********:.*.  ..:*:*..************************************

              SEA/E-120     EEKKVPINLWIDGKQTTVPIDKVKTSKKEVTVQELDLQARHYLHGKFGLYNSDSFGGKVQ 180
              SEA/E-18      EEKKVPINLWIDGKQTTVPIDKVKTSKKEVTVQELDLQARHYLHGKFGLYNSDSFGGKVQ 180
              SEE           EEKKVPINLWIDGKQTTVPIDKVKTSKKEVTVQELDLQARHYLHGKFGLYNSDSFGGKVQ 180
              SEA           EEKKVPINLWLDGKQNTVPLETVKTNKKNVTVQELDLQARRYLQEKYNLYNSDVFDGKVQ 180
                            **********:****.***::.***.**:***********:**: *:.***** *.****
                                    D                                   E
              SEA/E-120     RGLIVFHSSEGSTVSYDLFDAQGQYPDTLLRIYRDNTTISSTSLSISLYLYTT 233
              SEA/E-18      RGLIVFHSSEGSTVSYDLFDAQGQYPDTLLRIYRDNKTINSENLHIALYLYTT 233
              SEE           RGLIVFHSSEGSTVSYDLFDAQGQYPDTLLRIYRDNKTINSENLHIDLYLYTT 233
              SEA           RGLIVFHTSTEPSVNYDLFGAQGQYSNTLLRIYRDNKTINSENMHIDIYLYTS 233
                            *******:*  .:*.****.*****.:*********.**.* .: * :****:
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(57) **Abstract:** The present invention relates to compositions and methods of use, wherein the composition comprises a conjugate of a bacterial superantigen and an antibody moiety. More particularly, the bacterial superantigen has been modified to decrease seroreactivity with retained superantigen activity.

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