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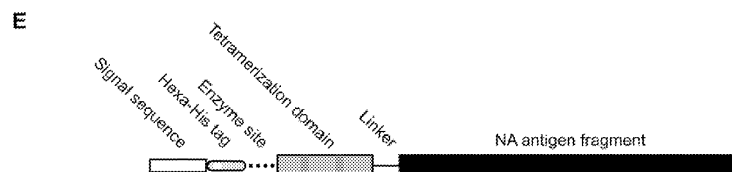


FIG. 1

(57) Abstract: The disclosure relates to compositions that include a recombinant influenza neuraminidase tetramer that includes four copies of a fusion protein which includes a DA4B tetramerization domain, optionally a linker, and an influenza NA head domain, and uses thereof. Novel linkers are provided. The disclosure further relates to a recombinant influenza neuraminidase (NA) polypeptide, comprising an influenza NA head domain comprising one or more amino acid substitutions selected from the group consisting of I99P, Y 100L, T 131 Q, C161V, E165S, S172A, V177I, S196T, V205I, Q408M, R419V, and V453T. Further provided are compositions, methods of making, and methods of use, for example as vaccines for influenza.