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(54) **Title:** RECOMBINANT HYBRID PROTEIN AND ITS USE

(57) **Abstract:** The invention relates to a recombinant hybrid protein REC2z with a structure as defined in the description, recombinant DNA sequences encoding this protein, vectors containing the recombinant DNA sequences, and eukaryotic and prokaryotic expression systems using the in vitro recombinant DNA sequences described below. The invention also relates to the use of the recombinant hybrid protein REC2z as a component of bioink for bioprinting and also as a component of biomaterials. In addition, the invention relates to the use of recombinant DNA sequences, expression vectors and expression systems to produce the recombinant hybrid protein REC2z. The invention finds applications in bioprinting, medicine and cell and tissue engineering.