ABSTRACT

RNA-TARGETING FUSION PROTEIN COMPOSITIONS AND METHODS FOR USE

Disclosed are compositions comprising: (a) a sequence comprising a guide RNA (gRNA) that specifically binds a target sequence within an RNA molecule and (b) a sequence encoding a fusion protein, the sequence comprising a sequence encoding a first RNA-binding polypeptide and a sequence encoding a second RNA-binding polypeptide, wherein neither the first RNA-binding polypeptide nor the second RNA-binding polypeptide comprises a significant DNA-nuclease activity, wherein the first RNA-binding polypeptide and the second RNA-binding polypeptide are not identical, and wherein the second RNA-binding polypeptide comprises an RNA-nuclease activity. Methods of making and methods of using compositions of the disclosure are also provided. For example, compositions of the disclosure may be used in the treatment of a disease or disorder in a subject. Exemplary disease or disorders of the disclosure include genetic and epigenetic diseases or disorders.

(Fig. 1)