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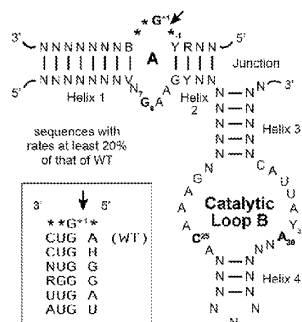


Fig. 1A

(57) Abstract: There is provided a ribozyme comprising: a) one or more catalytic domains capable of switching between an active state and an inactive state; b) one or more releasable RNA segments, wherein each of said releasable RNA segments is flanked by two ribozyme cleavage sites, wherein cleavage at each cleavage site is catalysed by at least one of the one or more catalytic domains in an active state; c) one or more trigger-binding domains, each of which is for the binding of a trigger nucleic acid molecule; wherein each of the one or more catalytic domains is linked to one of the one or more trigger-binding domains; wherein the catalytic domain is in an inactive state when the trigger-binding domain linked to said catalytic domain is not bound by the trigger nucleic acid molecule, and wherein the catalytic domain is in an active state when the trigger-binding domain linked to said catalytic domain is bound by the trigger nucleic acid molecule; and wherein when both cleavage sites flanking a releasable RNA segment are cleaved when catalysed by the one or more catalytic domains, the one or more releasable RNA segment is released from the ribozyme. Also disclosed are methods of detecting presence of a trigger nucleic acid molecule in a sample, methods of detecting presence of a sequence or mutation of interest on an nucleic acid of interest in a sample, and kits comprising the ribozymes thereof.