Figure S4

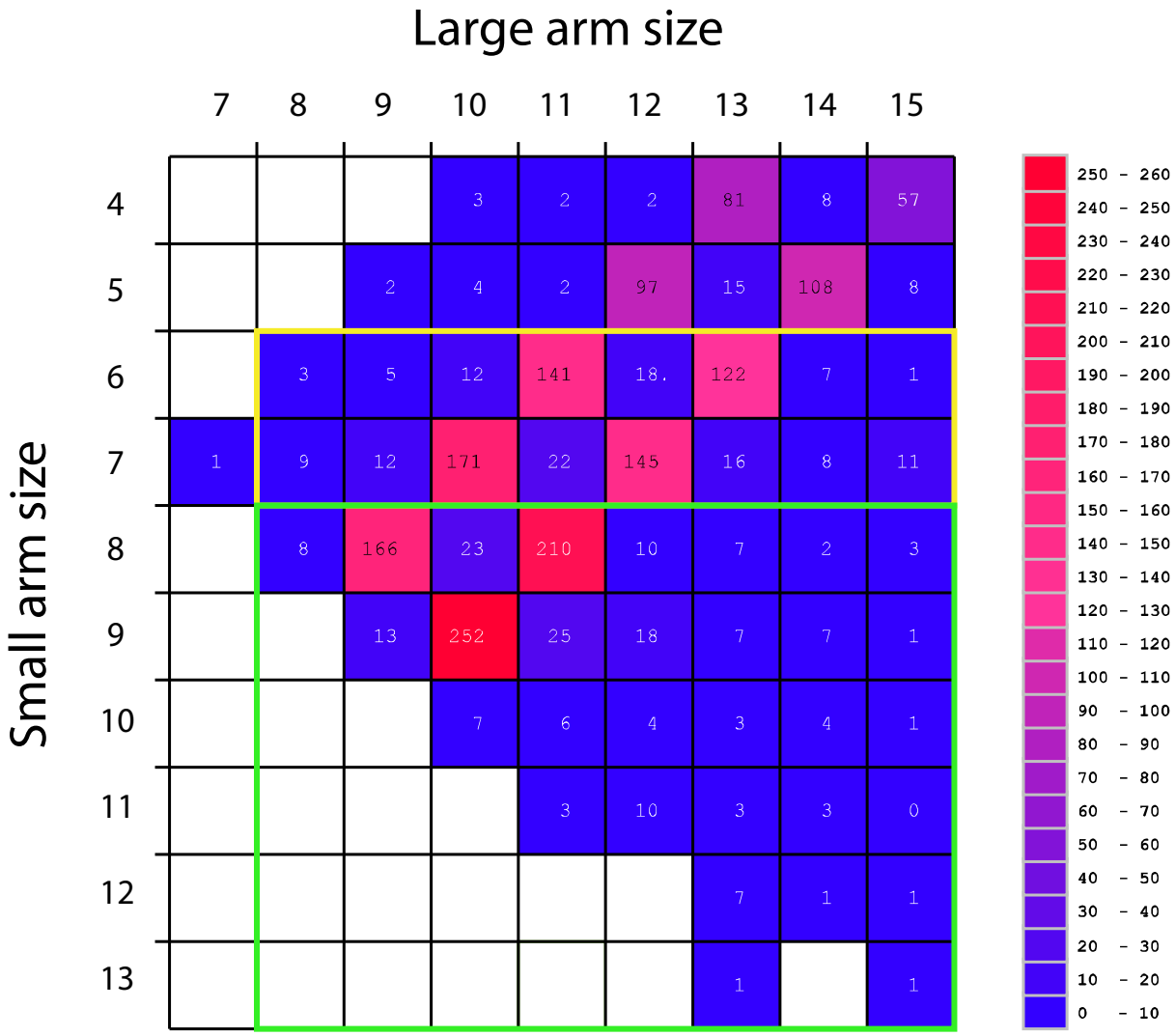

Fig. S4. Heatmap analysis of published rRNA-targeted probes (deposited in probeBase) that contain at least one RU cleavage site in their target region and thus are promising starting points for the design of specific LNAzymes. For each probe the lengths of the substrate-binding arms (in nucleotides), which would determine the suitability of the probes for use as LNAzymes, was determined and probe numbers for different arm lengths are presented. Probes that contained an RU cleavage site, but had arm lengths below or above the indicated ranges, were excluded from the analysis. The green rectangle encloses probes that may be used as efficient LNAzymes without elongation of any substrate-binding arm (i.e., the sequences upstream and downstream of the most centrally located RU cleavage site). The

yellow rectangle encloses probes that might need elongation (in one direction) by a few nucleotides to become efficient LNAzymes. The remaining probes have at least one very short substrate-binding arm, indicating that more extensive changes may be required for LNAzyme design based on these probes, which might lead to a reduced specificity and/or target group coverage. Please note that these assessments of LNAzyme efficiency are based on the results of this study and could be subject to modification when more rRNA-targeted LNAzymes have been designed and used in practice.