



**Sequences of adaptors, amplification and sequencing primers.** Adaptor sequences of a regular single-indexed Illumina multiplex library (as obtained using Illumina's TruSeq DNA sample preparation kit, cat. no. FC-121-2001/2002, or following the protocol provided in ref. 21 of the main text) are shown on top. Libraries prepared from single-stranded DNA differ by a deletion of 5 bp in the P5 adaptor. Both library types are compatible with double-indexed sequencing (see ref. 22 of the main text for details). Amplification and sequencing primers are indicated by arrows. Primers with prefix 'IS' are further described in ref. 21 of the main text.