

**Figure S3.** An aliquot of the secondary LM-PCR product (25  $\mu$ l of a 100  $\mu$ l reaction) is analyzed by agarose gel electrophoresis to verify the quality of the sample. The above example is a typical result for the LM-PCR process. Products typically appear as a low molecular weight smear, although some samples have more abundant junction products that appear as bands. Failed reactions may have only a primer dimer band of ~100 bp. The LM-PCR process is repeated on these samples until a similar result is obtained. [DNA marker is the 1 kb+ ladder (Invitrogen). Indicated bands are base pair values.]