

Supplemental Online Data

Appendix Figure 1. Main principles of allelic discrimination and detection strategies.

Main principles of allelic discrimination and detection strategies; the lines indicate which detection methodology can be applied following allelic discrimination.

Appendix Figure 2. Typical enzymes used in genotyping technologies.

DNA ligases link double-strand DNA breaks by forming phosphodiester bonds, whereas endonucleases and exonucleases cleave nucleotides of a polynucleotide sequence by hydrolyzing phosphodiester bonds.

Appendix Figure 3. Principle of single base extension and allele-specific PCR.

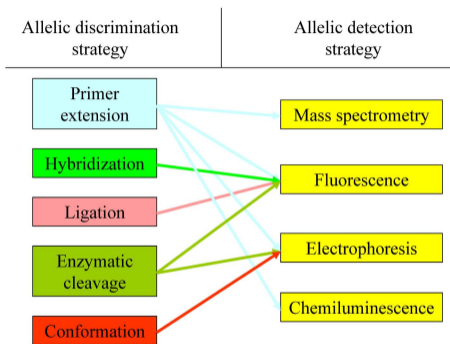
(a–b): Single base extension: A common forward primer binds just upstream of the SNP. Upon addition of dideoxynucleotide triphosphates (ddNTPs) and polymerase, the primer is extended with the complementary ddNTP, whereafter chain-extension stops. Detection is either by mass-spectrometry **(a)** or by fluorescence **(b)**. **(c):** Allele-specific PCR: Allele-specific forward primers for the region of interest bind to the template DNA and are subsequently extended by dNTPs. DNA amplification results in an increase in fluorescence signal.

Appendix Figure 4. Principle of the Taqman assay.

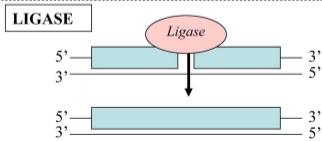
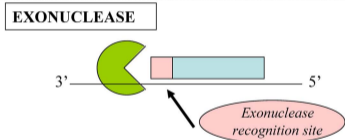
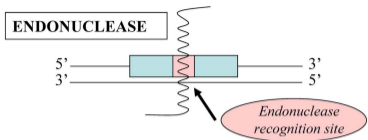
Taqman assay: This assay uses two allele-specific probes carrying a quencher dye and for each probe a different reporter dye. Only the perfectly matched probe with 100% complementarity to the DNA template is hybridized and cleaved during PCR amplification. Upon cleaving, the reporter is released from the quencher that subsequently emits its fluorescence.

Appendix Figure 5. Principle of ligation-based genotyping.

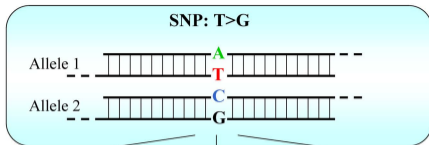
Allele-specific labeled probes hybridize at the SNP-site and a common probe binds immediately downstream of it. In case of perfect complementarity, DNA ligase joins the probes together to form one oligonucleotide, detectable by fluorescence.



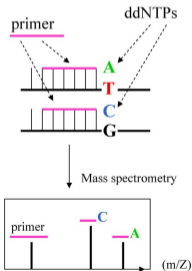
Supplemental Online Appendix Figure 1.



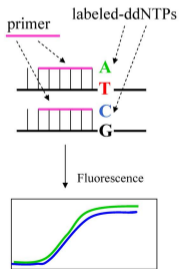
Supplemental Online Appendix Figure 2.



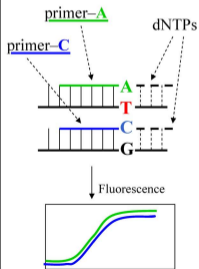
a) SBE – mass spectrometry



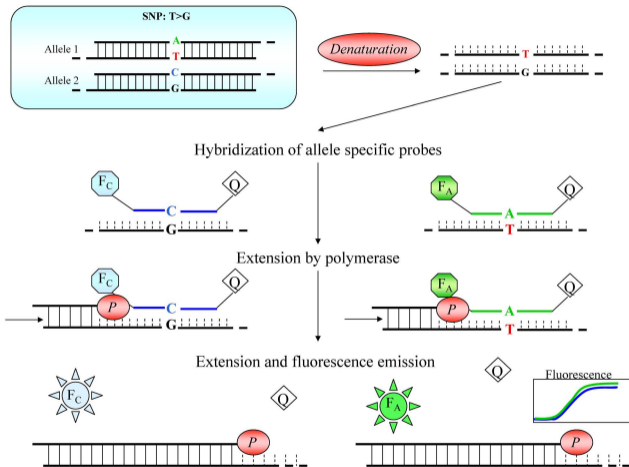
b) SBE – fluorescence



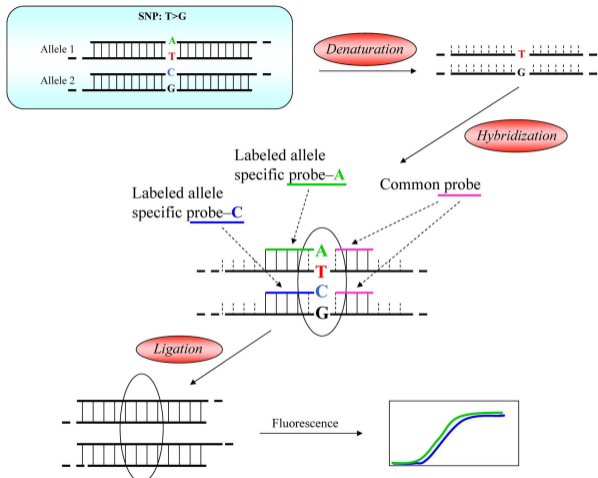
c) Allele specific PCR



Supplemental Online Appendix Figure 3.



Supplemental Online Appendix Figure 4.



Supplemental Online Appendix Figure 5.