

# Biotype's Twin Principle: The commercial answer to primer binding site mutations at STR loci



Two test kits for complementary amplification of STR loci of the German forensic DNA database

Bio**type**®

Biotype's product line Mentype® **Nonplex** consists of two different multiplex test systems for the amplification of the seven ISSOL-STR-Markers, SE33, and Amelogenin. Additionally, one kit includes the internal PCR control Mentype® **Quality Sensor (QS)** which provides helpful information on the efficiency of the PCR reaction and on the presence of PCR inhibitors. Each test kit consists of different locus-specific primer sets that target invariant sequences flanking the repeat region. Thus, identification of allele drop-outs due to primer binding site mutation can be achieved and avoids false exclusions in databases.

With Mentype® **Nonplex** PCR Amplifications Kits comfortable analysis of blood samples, buccal swabs and forensic stains is fast and reliable.

Biotype's product line Mentype® **Nonplex**

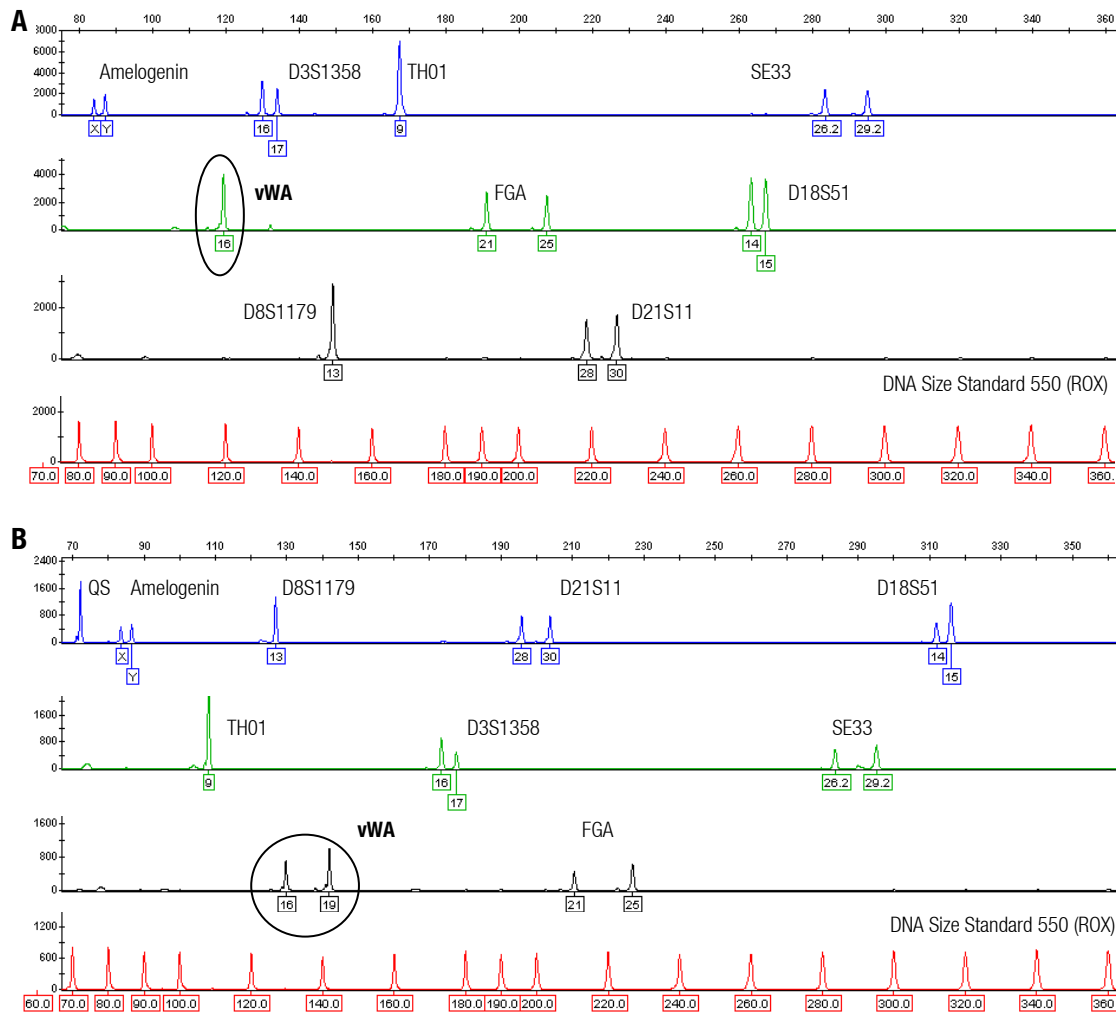
- Amplification with alternative primer sets in different colours
- Mentype® **Nonplex I**: Robust and comfortable analysis with primer sets from the literature
- Mentype® **Nonplex<sup>QS</sup>**: Most sensitive analysis, suitable for stain analysis, internal PCR control and set of primers that target all known primer binding site mutations of SE33



Locus	chromosomal Mapping	Nonplex I 41-09113-XXXX	Nonplex <sup>QS</sup> 41-09330-XXXX
Amelogenin	Xp22.1-22.3 Yp11.2	6-FAM 83, 86	6-FAM 83, 86
Quality Sensor	-		6-FAM 72
D3S1358	3p25.3	6-FAM 94-146	HEX 135-195
D8S1179	8q23.1-23.2	NED 118-187	6-FAM 95-164
D18S51	18q21.3	HEX 234-378	6-FAM 276-427
D21S11	21q21.1	NED 198-293	6-FAM 167-270
FGA (FIBRA)	4q28.2	HEX 159-234	NED 174-338
SE33 (ACTBP2)	6q14.2	6-FAM 190-377	HEX 196-377
TH01	11p15.5pter	6-FAM 146-189	HEX 82-131
vWA	12p13.31	HEX 91-159	NED 102-173

Cat No. XXXX: 0100, 0400, and 1000 reactions. Fluorescence label and amplicon sizes in bp analysed on ABI PRISM® 310/3130 Genetic Analyzer

## Example of use: DNA with a genetic mutation in the primer binding site of vWA



Electropherograms of PCR products using the Mentype® **Nonplex I** (A) and Mentype® **Nonplex OS** (B) analysed on an ABI PRISM® 310 Genetic Analyzer with GeneMapper™ ID software

### Technical specification

Detection limit: ≤ 200 pg genomic DNA  
 Optimal amount of template DNA per reaction: 0.2-2.0 ng  
 Volume per PCR-reaction: 25 µL  
 Fluorescence labels: 6-FAM, HEX, NED, ROX

### Use with

ABI PRISM® 310 Genetic Analyzer  
 ABI PRISM® 3100-Avant/3100 Genetic Analyzer  
 ABI PRISM® 3100/3130 Genetic Analyzer  
 ABI PRISM® 3730 DNA Analyzer

### Ordering information

Product	Content	Cat. No.
Mentype® <b>Nonplex OS Twin</b>	100 reactions Nonplex I / 100 reactions Nonplex OS	41-18310-0100
Mentype® <b>Nonplex OS Twin</b>	400 reactions Nonplex I / 400 reactions Nonplex OS	41-18310-0400
Mentype® <b>Nonplex OS Twin</b>	1000 reactions Nonplex I / 1000 reactions Nonplex OS	41-18310-1000