THE AMPFLSTR® NGM SELECT™ KIT: A NEXT-GENERATION MULTIPLEX STR KIT CONTAINING THE SE33 LOCUS

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We have previously developed the AmpFLSTR® NGM™ Kit according to the recommendations of the European forensic science community for a new, standardized multiplex STR kit. The new marker set provides enhanced power of discrimination to reduce the frequency of adventitious hits when searching ever-expanding national databases. The inclusion of mini STR loci in the multiplex, together with more robust PCR chemistry developed for the NGM Kit, allows better recovery of genotype information from degraded or inhibited forensic samples. Since the release of the NGM Kit, forensic scientists from several central European countries such as Germany, Austria and the Czech Republic have expressed interest in a similar kit that also includes the SE33 locus. Since it has been part of those countries' standard STR marker sets, including SE33 in the multiplex allows compliance with the new standards while still providing continuity with legacy database information.

The new AmpFLSTR® NGM SElect™ Kit contains the same 16 loci as the NGM Kit, plus SE33. The 17 loci are: D10S1248, vWA, D16S539, D2S1338, amelogenin, D8S1179, D21S11, D18S51, D22S1045, D19S433, TH01, FGA, D2S441, D3S1358, D1S1656, D12S391 and SE33. Aside from the presence of SE33, the new kit was designed to be essentially identical to the NGM Kit.

We performed developmental validation studies of the NGM SElect Kit according to the SWGDAM guidelines, and present the results of testing such critical performance parameters as sensitivity, species specificity, performance with inhibited PCRs and degraded DNAs, mixture sample analyses, and power of discrimination calculations based on a survey of population samples.