

## Y Chromosome AZF Analysis System

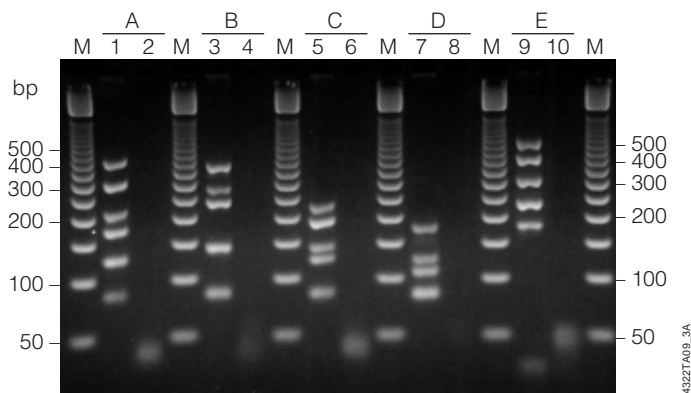
### CE marked system for analysis of the Y Chromosome

The Y Chromosome AZF Analysis System provides a multiplex PCR-based method to analyze the integrity of the human Y chromosome AZF region. The Y Chromosome AZF Analysis System is to be used as part of a diagnostic workup to characterize male infertility. This information is potentially useful for patients considering in vitro fertilization because deletions in the AZF region of the Y chromosome are passed onto male offspring produced by in vitro fertilization, resulting in infertility of the child.

### Description

The Y Chromosome AZF Analysis System consists of 20 primer pairs that are homologous to previously identified and mapped sequence-tagged sites (STS; 1–8). These primers will amplify nonpolymorphic short DNA segments from the AZF region of the Y chromosome, covering AZFa, AZFb, AZFc, proximal AZFc/AZFd (including *DAZ*, *KALY* and *SMCY*) and flanking loci for other key spermatogenesis-related genes (*RBM1*, *DFFRY* and *DBY*). The Y Chromosome AZF Analysis System is fully compliant with European Molecular Genetics Quality Network (EMQN) recommendations.

The primers have been combined into five Multiplex Master Mix sets (A–E) for use in multiplex PCR. This makes it possible to analyze all 20 STS by performing five concurrent PCR reactions (Figure 1).



**Example of amplification of male genomic DNA.** Multiplex-PCR amplification of male genomic DNA (MD115A) (lanes 1, 3, 5, 7, 9), as well as a no DNA negative control (lanes 2, 4, 6, 8, 10), for each of the five Multiplex Master Mixes.

Multiplex Master Mixes contain a control primer pair that amplifies fragments from the X-link *SMCX* locus or a unique region in both male and female DNA (*ZFX/ZFY*). Finally, Multiplex Master Mix E also includes a primer pair that amplifies a region of the *SRY* gene, acting as a control amplification for the testis-determining factor on the short arm of the human Y chromosome.

The Y Chromosome AZF Analysis System has been validated for use with the PerkinElmer GeneAmp® PCR System 2400, the PerkinElmer GeneAmp® PCR System 9700 or the PerkinElmer DNA Thermal Cycler Model 480 instruments.

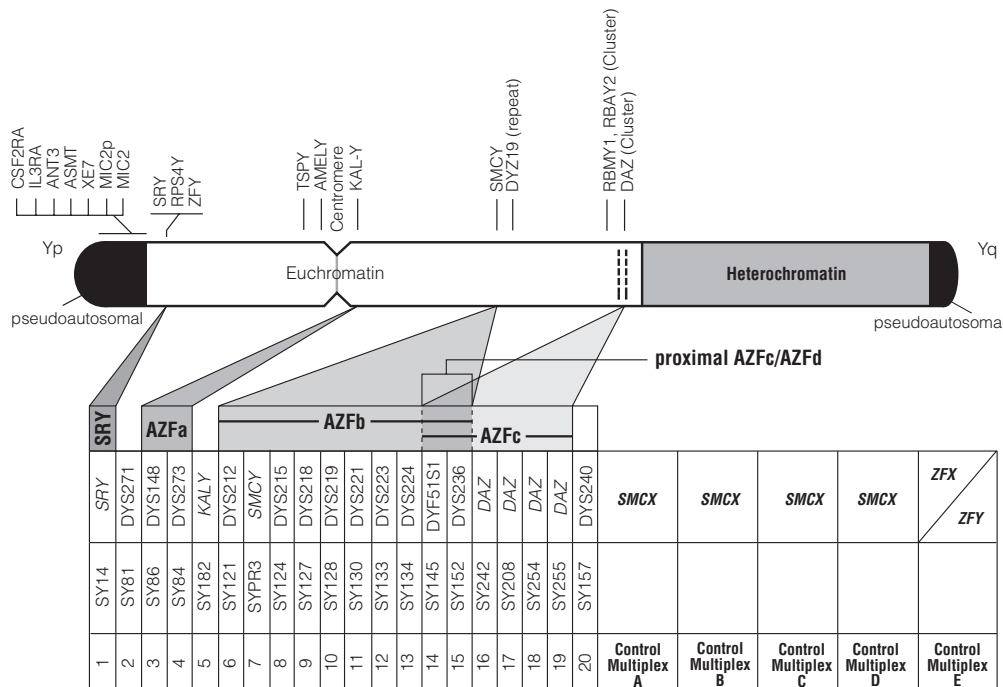
### Benefits:

- **Compliant with EU Directive 98/79/EC:** Y Chromosome AZF Analysis System is labeled as an in vitro diagnostic medical device and bears the CE Mark.
- **State-of-the-Art Detection of First Choice STS:** Primer pairs are compliant with current EMQN recommendations and include primer pairs to amplify *SRY*.
- **Single Amplification:** Simultaneous amplification of 5 multiplex reactions analyses extent of Y Chromosome integrity.
- **Complete System:** Optimized premixed Multiplex Master Mixes, including control primers to test for PCR amplification, provide a standardized panel of results.



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**Y Chromosome map.** Palindromes 8, 7, 6, 5 and 4 map in the proximal direction of SY121 and in the distal direction of SY182 (8). AZFc includes P1 and P2 (8). At least one copy of SY157 maps outside the AZFc boundary.

## Ordering Information

Product	Size	Cat. #
Y Chromosome AZF Analysis System <sup>(a,b)</sup>	25 reactions	MD1631

Not for Sale in the United States.

## Additional Information

Literature	Part#
Y Chromosome AZF Analysis System, Technical Manual <a href="http://www.promega.com/tbs/tm252/tm252.html">http://www.promega.com/tbs/tm252/tm252.html</a>	TM252

## References

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- Vogt, P.H. *et al.* (1997) Report of the third international workshop on Y-chromosome mapping 1997. *Cytogenet. Cell Genet.* **79**, 1–20.
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  - Especially note Figure 2, available online as data supplementary to the article.

<sup>(a)</sup> This product is designed and sold for use in the multiplex PCR process covered by U.S. Pat. No. 5,582,989. A limited license has been granted under the patent to use only this amount of the product to practice the multiplex PCR process and is conveyed to the purchaser by the purchase of this product.

<sup>(b)</sup> Use of this product requires performance of the polymerase chain reaction (PCR), which is the subject of European Pat. Nos. 201,184 and 200,362, and U.S. Pat. Nos. 4,683,195, 4,965,188 and 4,683,202 owned by Hoffmann-La Roche. Purchase of this product does not include or provide a license with respect to these patents or any other PCR-related patent owned by Hoffmann-La Roche or others. Users of this product may, therefore, be required to obtain a patent license, depending on the country in which the system is used. For more specific information on obtaining a PCR license, please contact Hoffmann-La Roche.

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