

GT AZFScreen Plus v2

CAT# GT-11304

GT AZFScreen Plus v2 kit is an STS and STR-based kit for rapid and accurate detection of Y chromosome Microdeletions plus Klinefelter syndrome.

The kit includes 36 markers, 26 STS (sequence-tagged sites), 3 SD (Segmental Duplication), and 7 STR markers on the X-chromosome. These loci are commonly used for the detection of the Y chromosome microdeletions and Klinefelter syndrome. Extra X chromosome linked STR markers ease the detection of Klinefelter syndrome, another cause of male infertility.








GT AZFScreen Plus v2 kit consists markers which have been designed and selected specifically according to the EMQN (European Molecular Genetics Quality Network) 2023 Best Practice guideline.

Storage conditions

- Prevent exposure of primer mix to direct light. This may affect the intensity of the fluorescent dye during CE.
- Store all kit components at -20°C for better stability.
- Avoid repeated freezing-thawing cycles to maintain the good quality of the kit. We recommend aliquoting the kit components if are going to be used for a long duration.

GT AZFScreen Plus v2 components

Table 1: Provided with the Kit are Box A and Box B. They should be kept separately.

BOX-A			BOX-B		
	Tube Label	Tube cap color		Tube Label	Tube cap color
1	PCR Mix		1	GT500 Size Standard	
2	Primer Mix		2	GTM5 v2 (Optional)	
3	GT HSTaq				
4	GT QCW (Control DNA-50ng/μl)				
5	GT QCW (H2O)				

Instructions

1. Bring all the components of the kit to room temperature.
2. Vortex Primer Mix and PCR Mix and spin down briefly to remove all residues from the wall and the lid.
3. Gently mix the enzyme by inverting or pipetting.
4. Prepare a Master Mix for your reaction according to the following recipe. Every preparation can be done at room temperature.

Table 2: PCR reaction set-up

Component	Volume for 1 reaction[μl]
GT QCW (H ₂ O)	10
PCR Mix	7
Primer Mix	1
GT HSTaq	1

5. Vortex Master Mix briefly.
6. Transfer 19μl of Master Mix into each 0.2ml PCR tube for each sample you want to analyze.

7. Add 1µl of DNA template (5-10 ng per reaction) into each PCR tube.
8. Vortex and spin down each PCR tube. Make sure that no droplets are left at the tube lid.
9. Place tubes into a thermal cycler.
10. Please use the following PCR program to amplify all markers.
11. Store the PCR products at 2-6°C until analysis on a Capillary Electrophoresis system.

Table 3: PCR program

Initial step	Cycling			Final Extension	Storing in Cycler
	Denaturation	Annealing	Extension		
95 °C	95 °C	63 °C	70 °C	70 °C	4 °C
20 min	1 min	90 sec	2 min	17-20 min	∞
27-30 Cycles					

Note

- We recommend storing PCR products at 2-6°C in a dark place (fluorescent dyes!)
- The quality of the results will reduce with increased time gap between PCR amplification and capillary electrophoresis.
- A quality control (provided with the kit) and a negative control should be run in each Multiplex PCR to verify the successful amplification of each marker.
- Varying quantities of DNA templates may require different numbers of cycles in PCR program. Please see “GT AZFScreen Plus v2 User Manual” for further information.

WARNING

After PCR is complete, tubes should never be opened in the PCR setup area or beside the kit components. Risk of contamination!

How to analyze data from GT AZFScreen Plus v2 Kit

- GT AZFScreen Plus v2 Kit is optimized for usage on a Compact Spectrum CE System from Promega or ABI PRISM Genetic Analyzer like ABI 3130/xl, ABI3500/xL and SeqStudio. Make sure your Data Collection Software supports 5-dye fragment analysis.
- Perform Spectral Calibration using GTM5 v2 Matrix Standard.
- We recommend verifying successful Multiplex PCR by gel electrophoresis before analyzing it on a CE system.
- Prepare PCR products for capillary electrophoresis according to the ABI or Promega protocols. Analyze the samples using the GT AZFScreen Plus v2 GeneMapper Panel provided on Genetek website.

Note

- For further information regarding the GT AZFScreen Plus v2 Kit please see “GT AZFScreen Plus v2 User Manual” available from the Genetek website. It includes recommendations for different DNA amounts per reaction, a table containing the names and sizes of all amplified markers as well as troubleshooting.
- To simplify the analysis of your samples, we have provided a panel.
- Please find all documents regarding GT AZFScreen Plus v2 Kit on our website.

www.genetek-biopharma.com.

- It may arise that alleles fall outside their size range and overlap with the size range of another locus. This appears at low frequencies in populations particularly for STR markers.
- For any further clarification, if needed please contact our technical service via email: (support@genetek.de).