

# GT AZFScreen v2

CAT# GT-11303

**GT AZFScreen v2 kit is an STS (Sequence-Tagged Sites) based kit for rapid and accurate detection of Y chromosome microdeletions.**








The kit includes 29 markers [26 STS, 2 SD (Segmental Duplication), and 1 STR (Short Tandem Repeat)]. These loci are commonly used for the detection of Y chromosome microdeletions and Klinefelter syndrome. GT AZFScreen v2 kit consists of markers that are designed and selected specifically according to EMQN 2023 (European Molecular Genetics Quality Network) guidelines. To specifically detect Klinefelter Syndrome, we recommend using the GT AZFScreen Plus v2 kit

## Storage conditions

- Prevent exposure of primer mix to direct light. This may have an impact on the intensity of the fluorescent dye.
- Store all components at -20°C.
- Avoid repeated freezing-thawing cycles to maintain the good quality of the kit. We recommend aliquoting the components if the kit is going to be used less frequently and in a long duration.

## GT AZFScreen 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 colour		Tube Label	Tube cap colour
1	PCR Mix		1	GT500 Size Standard	
2	Primer Mix		2	GTM5 v2 (Optional)	
3	GT HSTaq				
4	GT QCDM102 (Control DNA-50ng/μl)				
5	GT QCW (H2O)				

## Instructions

1. Bring all the kit components to room temperature.
2. Vortex the Primer Mix and PCR Mix and spin them down briefly to remove all residues from the lid. Gently mix the enzyme by inverting or pipetting.
3. 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 <sub>2</sub> O)	10
PCR Mix	7
Primer Mix	1
GT HSTaq	1

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

6. Add 1µl of DNA template (5-10 ng per reaction) to each PCR tube.
7. Vortex and spin down each PCR tube. Make sure that no drops are left at the tube lid.
8. Place tubes into a thermal cycler.
9. Please use the following PCR program for the amplification of all markers.
10. Store the PCR products at 2-6°C until analysis on a CE 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 the PCR product at 2-6°C in a dark place (fluorescent dyes!)
- The quality of the results may be reduced with an increased time gap between PCR amplification and capillary electrophoresis.
- A quality control (provided in 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 the PCR program. Please see “GT AZFScreen v2 User Manual” for further information.

## WARNING

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

## How to analyze data from GT AZFScreen v2 Kit

- GT AZFScreen v2 Kit is optimized for usage on Compact Spectrum CE System from Promega and ABI PRISM Genetic Analyzer like ABI 3130/xl or ABI3500/xL. Make sure your Data Collection Software supports 5-dye fragment analysis.
  - Perform Spectral Calibration using GTM5 v2 Matrix Standard included in the kit.
  - We recommend verifying a successful Multiplex PCR by running a small amount of the PCR product on 1.5% agarose gel before analyzing it on Genetic Analyzer.
  - Prepare PCR products for capillary electrophoresis according to the ABI protocol.
- Analyze the samples using GT AZFScreen v2 GeneMapper Panel provided on our website.

## Note

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

[www.genetek-biopharma.com](http://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.
- For any further clarification, please contact our technical service via email: ([support@genetek.de](mailto:support@genetek.de)).