

## GPR - GenePix Results format (\*.gpr)

Download a [sample GPR file](#).

GenePix Results data are saved as GPR files, which are in [Axon Text File \(ATF\)](#) format. A Results file contains general information about image acquisition and analysis, as well as the data extracted from each individual feature. As of GenePix Pro version 3.0.1.20, the GPR version number is 1.3.

### GPR Header

A sample GPR file header and a description of each entry are shown below:

Entry	Description
<b>ATF 1.0</b>	File type and version number.
<b>24 43</b>	Number of optional header records and number of data fields (columns).
<b>"Type=GenePix results 1.3"</b>	Type of ATF file.
<b>"DateTime=2000/02/09 17:15:48"</b>	Date and time when the image was acquired.
<b>"Settings=C:\Genepix\Genepix.gps"</b>	The name of the settings file that was used for analysis.
<b>"GalFile=C:\Genepix\Demo.gal"</b>	The GenePix Array List file used to associate Names and IDs to each entry.
<b>"Scanner=GenePix 4000B"</b>	Type of scanner used to acquire the image.
<b>"Comment=hyb 2673"</b>	User-entered file comment.
<b>"PixelSize=10"</b>	Resolution of each pixel in $\mu\text{m}$ .
<b>"ImageNAME=635 nm 532 nm"</b>	Name of each image buffer.
<b>"FILENAME=C:\Data\Axd_635 nm.tif C:\Data\Axd_532 nm.tif"</b>	File name for each image buffer. In a multi-image tiff file, the same name is repeated.
<b>"PMTVolts=600 600"</b>	The voltage of the PMTs during acquisition.
<b>"NormalizationFactor:RatioOfMedians=0.819944"</b>	The Ratio of Medians Normalization Factor.
<b>"NormalizationFactor:RatioOfMeans=0.848769"</b>	The Ratio of Means Normalization Factor.
<b>"NormalizationFactor:MedianOfRatios=0.843367"</b>	The Median of Ratios Normalization Factor.
<b>"NormalizationFactor:MeanOfRatios=0.427747"</b>	The Mean of Ratios Normalization Factor.
<b>"NormalizationFactor:RegressionRatio=1.0055"</b>	The Regression Ratio Normalization Factor.
<b>"JpegImage="C:\Data\Axd Image.jpg"</b>	Name of optional compressed image saved with the results file.
<b>"RatioFormulation=W1/W2 (532 nm/635 nm)"</b>	The ratio formulation of the ratio image, showing which image is numerator and which is denominator.

"Barcode=00331"	The barcode symbols read from the image.
"ImageOrigin=0, 0"	The origin of the image relative to the scan area.
"JpegOrigin=390, 4320"	The origin of the Results JPEG image (the bounding box of the analysis Blocks) relative to the scan area origin.
"Creator=GenePix 3.0.1.20"	The version of the GenePix Pro software used to create the Results file.
"Temperature=1.5"	The temperature of the scanner in volts.
"LaserPower=1 1"	The power of each laser in volts.
"LaserOnTime=5 5"	The laser on-time for each laser in minutes.
<b>Data record column headings</b>	Column titles for each measurement (see below).
<b>Data Records</b>	Extracted data.

## GPR Data

The list below describes each column of data in the Results file.

<b>Column Title</b>	<b>Description</b>
<b>Block</b>	the block number of the feature.
<b>Column</b>	the column number of the feature.
<b>Row</b>	the row number of the feature.
<b>Name</b>	the name of the feature derived from the Array List (up to 40 characters long, contained in quotation marks).
<b>ID</b>	the unique identifier of the feature derived from the Array List (up to 40 characters long, contained in quotation marks).
<b>X</b>	the X-coordinate in $\mu\text{m}$ of the center of the feature-indicator associated with the feature, where (0,0) is the top left of the image.
<b>Y</b>	the Y-coordinate in $\mu\text{m}$ of the center of the feature-indicator associated with the feature, where (0,0) is the top left of the image.
<b>Dia.</b>	the diameter in $\mu\text{m}$ of the feature-indicator.
<b>F635 Median</b>	median feature pixel intensity at wavelength #1 (635 nm).
<b>F635 Mean</b>	mean feature pixel intensity at wavelength #1 (635 nm).
<b>F635 SD</b>	the standard deviation of the feature pixel intensity at wavelength #1 (635 nm).
<b>B635 Median</b>	the median feature background intensity at wavelength #1 (635 nm).
<b>B635 Mean</b>	the mean feature background intensity at wavelength #1 (635 nm).
<b>B635 SD</b>	the standard deviation of the feature background intensity at wavelength #1 (635 nm).

<b>% &gt; B635 + 1 SD</b>	the percentage of feature pixels with intensities more than one standard deviation above the background pixel intensity, at wavelength #1 (635 nm).
<b>% &gt; B635 + 2 SD</b>	the percentage of feature pixels with intensities more than two standard deviations above the background pixel intensity, at wavelength #1 (635 nm).
<b>F635 % Sat.</b>	the percentage of feature pixels at wavelength #1 that are saturated.
<b>F532 Median</b>	median feature pixel intensity at wavelength #2 (532 nm).
<b>F532 Mean</b>	mean feature pixel intensity at wavelength #2 (532 nm).
<b>F532 SD</b>	the standard deviation of the feature intensity at wavelength #2 (532 nm).
<b>B532 Median</b>	the median feature background intensity at wavelength #2 (532 nm).
<b>B532 Mean</b>	the mean feature background intensity at wavelength #2 (532 nm).
<b>B532 SD</b>	the standard deviation of the feature background intensity at wavelength #2 (532 nm).
<b>% &gt; B532 + 1 SD</b>	the percentage of feature pixels with intensities more than one standard deviation above the background pixel intensity, at wavelength #2 (532 nm).
<b>% &gt; B532 + 2 SD</b>	the percentage of feature pixels with intensities more than two standard deviations above the background pixel intensity, at wavelength #2 (532 nm).
<b>F532 % Sat.</b>	the percentage of feature pixels at wavelength #2 that are saturated.
<b>Ratio of Medians</b>	the ratio of the median intensities of each feature for each wavelength, with the median background subtracted.
<b>Ratio of Means</b>	the ratio of the arithmetic mean intensities of each feature for each wavelength, with the median background subtracted.
<b>Median of Ratios</b>	the median of pixel-by-pixel ratios of pixel intensities, with the median background subtracted.
<b>Mean of Ratios</b>	the arithmetic mean of the pixel-by-pixel ratios of pixel intensities, with the median background subtracted.
<b>Ratios SD</b>	the standard deviation of pixel intensity ratios.
<b>Rgn Ratio</b>	the regression ratio.
<b>Rgn R<sup>2</sup></b>	the coefficient of determination for the current regression value.
<b>F Pixels</b>	the total number of feature pixels.
<b>B Pixels</b>	the total number of background pixels.
<b>Sum of Medians</b>	the sum of the median intensities for each wavelength, with the median background subtracted.
<b>Sum of Means</b>	the sum of the arithmetic mean intensities for each wavelength, with the median background subtracted.
<b>Log Ratio</b>	log (base 2) transform of the ratio of the medians.
<b>Flags</b>	the type of flag associated with a feature.
<b>F1 Median – B1</b>	the median feature pixel intensity at wavelength #1 with the median background subtracted.
<b>F2 Median – B2</b>	the median feature pixel intensity at wavelength #2 with the median background subtracted.
<b>F1 Mean – B1</b>	the mean feature pixel intensity at wavelength #1 with the median background subtracted.
<b>F2 Mean – B2</b>	the mean feature pixel intensity at wavelength #2 with the median background subtracted.
<b>Index</b>	the number of the feature as it occurs on the array.