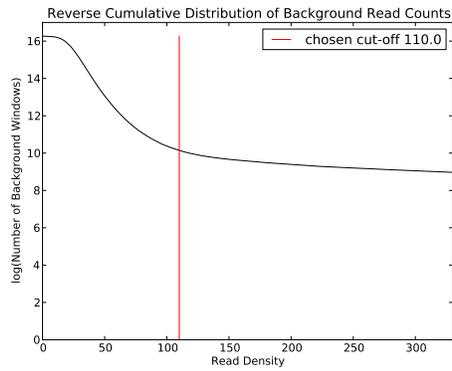


# CHD2: Filtering of Background Read Counts:

## 0.1

Used BG cut-off: 110

25541 of 11588999 input windows were filtered out (0.220390044041 percent).



# Fitting Background Noise Distribution:

## 0.2

Fitted parameters:

-sigma: 0.227188926807797

-rho: 0.0126184099691241

-mu: -0.100426695530838

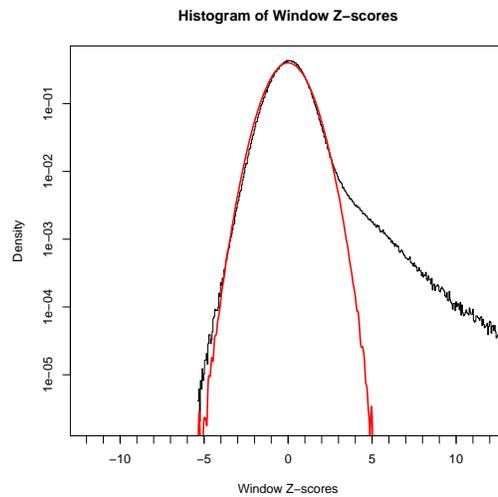


Figure 1: Distribution of Window Z-values with Fitted Gaussian.

## Determining Z-value Cut-off and Mergeing Windows:

### Bin Reads Log

Z value cut-off: 3.52

Number of windows above Z value cut-off: 72172

Number of regions above Z value cut-off: 26971

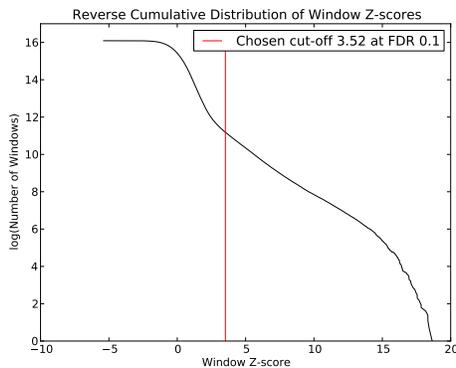


Figure 2: Reverse Cumulative Distribution of Window Z-values.

## Refining Peaks (Gaussian Mixture Modelling):

### 0.3

About 27000 input regions.

Found mean fragment length 103.0. Constrained sigma to 31.142–88.142

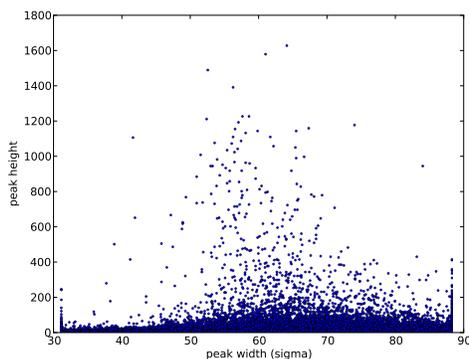


Figure 3: Scatter plot of peak height versus peak width

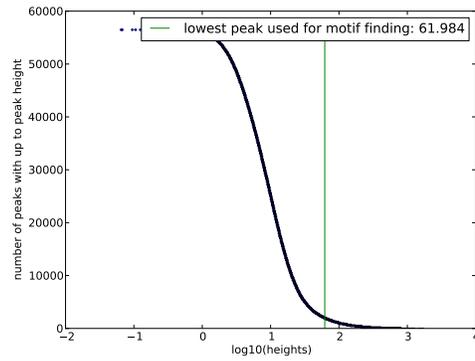


Figure 4: Reverse cumulative distribution of peak heights

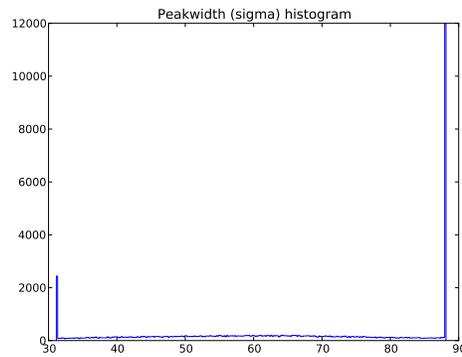


Figure 5: Histogram of peak widths (sigmas)

## Computing Z-scores of Refined Peaks:

### 0.4

Total number of peaks: 56476

Number of peaks above Z-score of 3.52: 37435

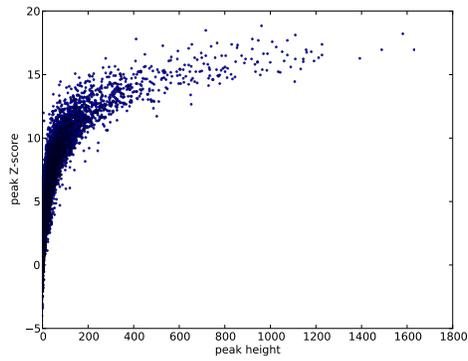


Figure 6: Scatter plot of peak height versus peak Z-score

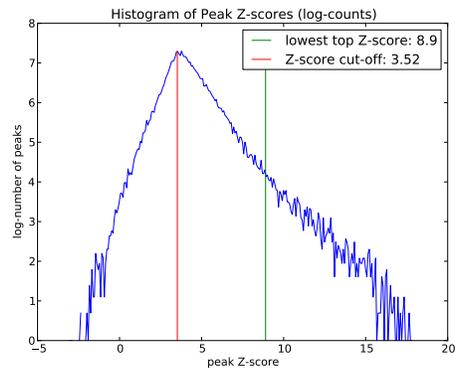


Figure 7: Histogram of peak Z-scores

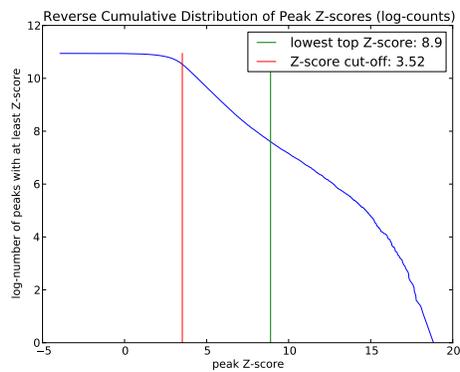


Figure 8: Reverse cumulative of peak Z-scores

## Annotating Refined Peaks:

0.5

474 peaks were not annotated out of 37435 peaks.