# Optional: Add UCSC CpG island annotations

Partek Genomics Suite software can view annotation .BED files as tracks in the Genome Viewer. We can add a CpG islands track to the Genome Viewer using the UCSC Genome Browser CpG islands annotation.

- Go to UCSC Genome Browser
- Select **Table Browser** under *Tools* in the main command bar of the webpage (Figure 1)

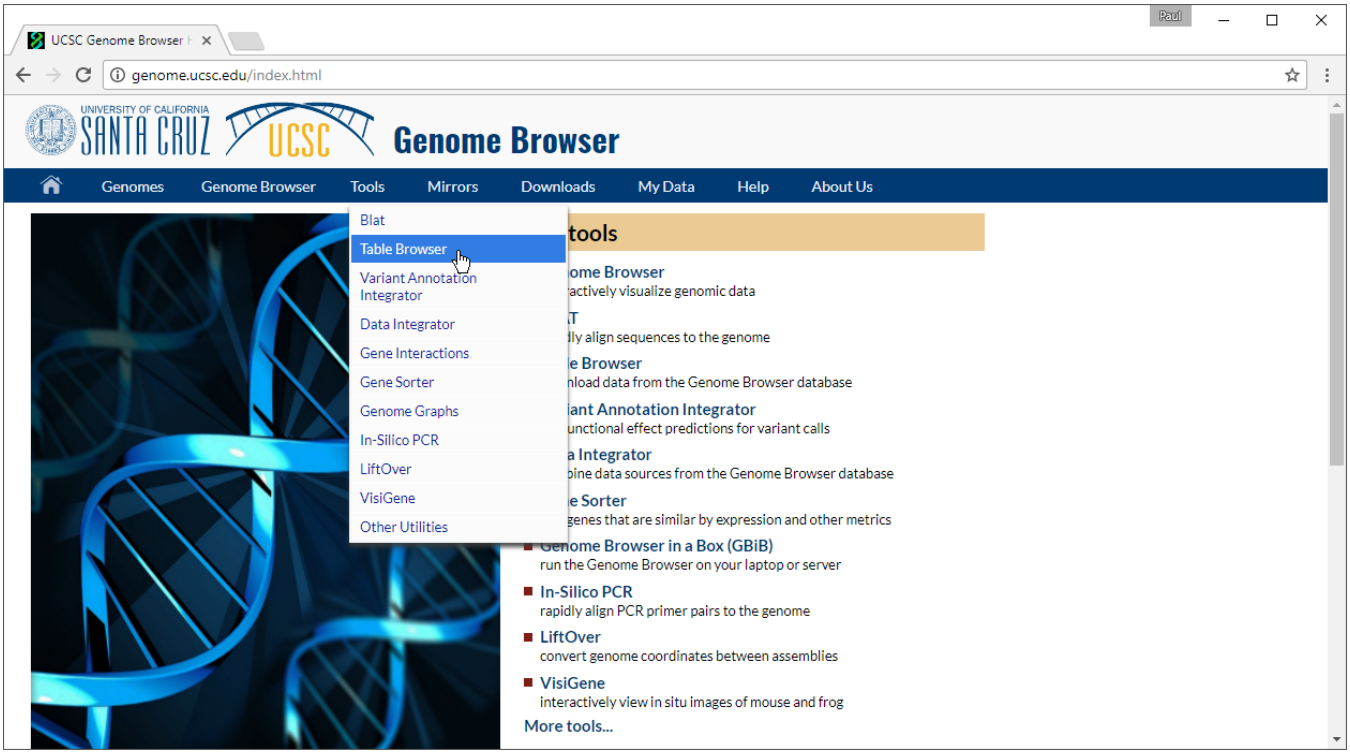


*Figure 1. Navigating to the Table Browser at the UCSC Genome Browser website*

- Configure the *Table Browser* page as shown (Figure 2)

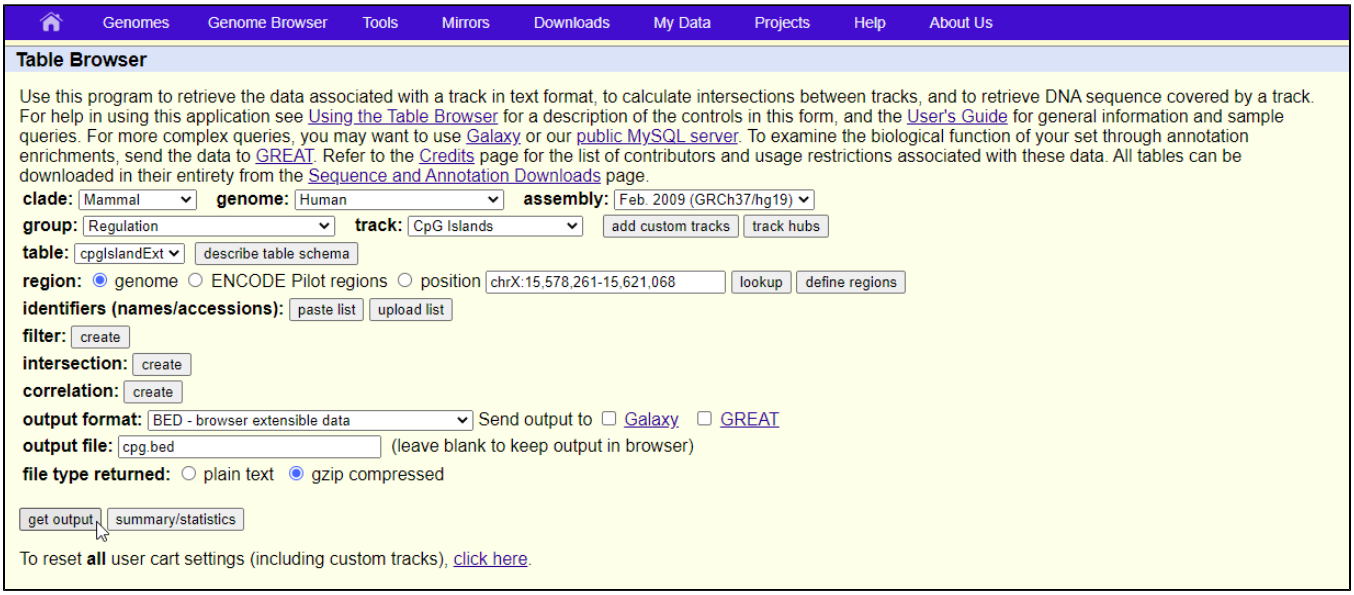


*Figure 2. Configuring the Table Browser to output CpG Islands BED file*

- Set *assembly* to Feb. 2009 (GRCh37/hg19)
- Set *group* to **Regulation**
- Set *track* to **CpG Islands**
- Set *table* to **cpgIslandExt**
- Set *output format* to **BED**
- Set *output file* to **cpg.bed**
- Select **get output**

The *Output cpgIslandExt as BED* page will open.

- Select **get BED** to download a compressed folder containing the BED file
- Unzip the file using 7-Zip, WinRAR, or a similar program of your choice to a location you will be able to find

Next, we can import the BED file into Partek Genomics Suite.

- Select **Genomic Database...** under *Import* under *File* in the main toolbar in Partek Genomics Suite (Figure 3)

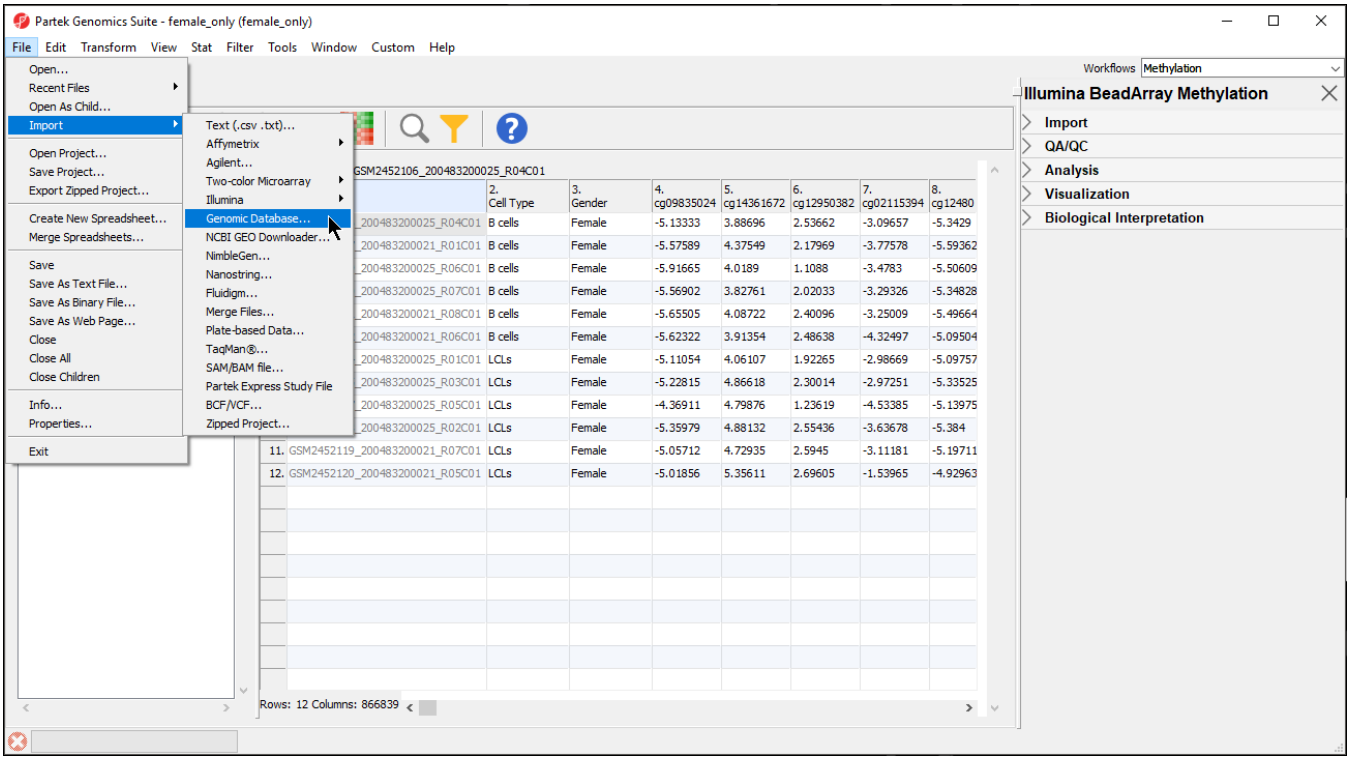


*Figure 3. Importing the CpG Islands map BED file*

- Select the file **cpg.bed**

The BED file will open as a new spreadsheet.

- Change the spreadsheet name to *UCSC CpG Island Annotation* and save it

For this region list, you can also calculate the average beta values for the probes in each island per sample and detect differential methylated CpG islands regions. Detailed information on how to get average beta value for each CpG can be found in the *Determining the average values for a region list* section of Starting with a list of genomic regions.

## Additional Assistance

If you need additional assistance, please visit our support page to submit a help ticket or find phone numbers for regional support.

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