Exercise – UCSC Genome Browser

This exercise is a basic introduction to the UCSC genome browser. Read the text and answer the question written in red.

- Open UCSC browser [http://genome.ucsc.edu/](http://genome.ucsc.edu/) and find the human gene Artn (select isoform 1)
  - Via ‘Genome Browser’ & ‘position or search term’

1. Understanding the graphical view
   a. Meaning of color coding?
   b. What does the 3 line types (blocks) represent:
      i. The lines?
      ii. The relative thin blocks?
      iii. The fat blocks?

- Add the track SNPs (135) – Color on SNPs
  - Zoom in on the SNPs – click on ‘base position’ bar in top of window
  - Donor/acceptor pictures are shown at the end of exercise

2. What is the color of the Non-Synonymous SNPs?
3. What is the implication of SNP rs2242637?
4. What is the implication of SNP rs12737332? (use figures 1 & 2)

- Orthologues

5. What is the % identity between human and mouse Artn?
6. What are the up/down stream neighbours of Artn?
7. Is the synteny conserved in mouse?

Donor/Acceptor sites
Figure 1 shows logo for a small set of human Acceptor sites

Figure 2 shows logo for a small set of human donor sites