Assignment 3
FADD Gene

1. Start in the "Gene" Database at NCBI. You can get there from the NCBI homepage. Put a link to YG (your gene) on the home page.

   http://www.ncbi.nlm.nih.gov/sites/entrez?Db=gene&Cmd=ShowDetailView&TermToSearch=8772&ordinalpos=1&itool=EntrezSystem2.PEntrez.Gene.Gene_ResultsPanel.Gene_RVDocSum#gengene

2. Find the RefSeq for YG's cDNA and Protein. How many nucleotides are in the cDNA and how many amino acids are in the protein. Put a link on your homepage.

   There are 1873bp in the cDNA.
   http://www.ncbi.nlm.nih.gov/entrez/viewer.fcgi?val=NM_003824.2

   There are 208 Amino Acids in the Protein.
   http://www.ncbi.nlm.nih.gov/entrez/viewer.fcgi?db=protein&id=4505229

3. What Chromosome is YG on? Which chromosome arm is it on? How many nucleotides are listed in this entire chromosome? How many introns does YG have? Put a link to the MapViewer for YG. Put in a link to the complete human chromosome sequence that your gene is on.

   The Gene is on Chromosome 11. It is located on arm q (11q13.3).
   On the entire chromosome, there are approximately 134Mbp.
   There are 2 exons.
   There is only one intron.

   FADD's Gene Card:
   http://www.genecards.org/cgi-bin/carddisp.pl?gene=FADD&search=FADD

   Mapviewer image:
   http://www.ncbi.nlm.nih.gov/mapview/maps.cgi?taxid=9606&CHR=11&maps=genes-r,pheno,morbid,genec&R1=on&query=FADD&VERBOSE=ON&ZOOM=3

   FADD-genomic regions, transcripts, products, context
   http://www.ncbi.nlm.nih.gov/sites/entrez?db=gene&cmd=retrieve&dopt=full_report&list_uids=8772

4. Are there functional protein domains described for YG? Give a link for YG that discusses its domains.

   Yes, there are functional protein domains for this gene.
   http://www.ncbi.nlm.nih.gov/Structure/mmdb/mmdbsrv.cgi?uid=14675

5. Can you find any PubMed references for this gene? Give me some link(s) to a PubMed search you performed to learn more about YG.

   There are many PubMed References for the gene.

   http://www.ncbi.nlm.nih.gov/sites/entrez?cmd=Retrieve&db=pubmed&list_uids=17235653
   http://www.ncbi.nlm.nih.gov/sites/entrez?cmd=Retrieve&db=pubmed&list_uids=17511679
   http://www.ncbi.nlm.nih.gov/sites/entrez?cmd=Retrieve&db=pubmed&list_uids=17031492
   http://www.ncbi.nlm.nih.gov/sites/entrez?cmd=Retrieve&db=pubmed&list_uids=16937440
   http://www.ncbi.nlm.nih.gov/sites/entrez?cmd=Retrieve&db=pubmed&list_uids=16871589
   http://www.ncbi.nlm.nih.gov/sites/entrez?cmd=Retrieve&db=pubmed&list_uids=11034606
   http://www.ncbi.nlm.nih.gov/sites/entrez?cmd=Retrieve&db=pubmed&list_uids=10640736
   http://www.ncbi.nlm.nih.gov/sites/entrez?cmd=Retrieve&db=pubmed&list_uids=8955195
   http://www.ncbi.nlm.nih.gov/sites/entrez?cmd=Retrieve&db=pubmed&list_uids=8681376
   http://www.ncbi.nlm.nih.gov/sites/entrez?cmd=Retrieve&db=pubmed&list_uids=8565075
   http://www.ncbi.nlm.nih.gov/sites/entrez?cmd=Retrieve&db=pubmed&list_uids=7538907
   http://www.ncbi.nlm.nih.gov/sites/entrez?cmd=Retrieve&db=pubmed&list_uids=7536190

6. Does this gene have any homologs in other species? Give me some links to some of them. You can find this through Homologene Database.

   Yes, the gene has homologs in other species.

   http://www.ncbi.nlm.nih.gov/sites/entrez?Db=homologene&Cmd=ShowDetailView&TermToSearch=2836&ordinalpos=1&itool=EntrezSystem2.PEntrez.Homologene.Homologene_ResultsPanel.Homologene_RVDocSum

7. YG is in OMIM. What is a biological consequence of a mutation in this protein for humans? Give me the OMIM link on your page.

   A deficiency of FADD causes an inhibition of Tcell development at the CD4(-)/CD8(-) stage. It also causes the reduction of the mature T cells that are already present. The mutation does not affect apoptosis or signaling events.
   http://www.ncbi.nlm.nih.gov/entrez/dispomim.cgi?id=602457

8. Can you find your gene in SwissProt (http://us.expasy.org/sprot/) database ? Give me the accession number in SwissProt.

Yes, the FADD gene can be found in SwissProt.
Its accession number is Q13158 and Q14866.
http://www.pir.uniprot.org/cgi-bin/upEntry?id=q13158