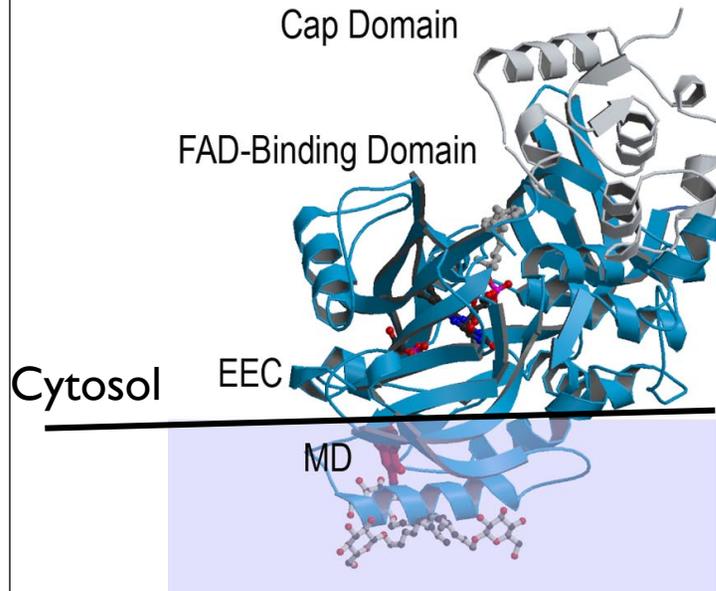


Glycerol-3-phosphate dehydrogenase

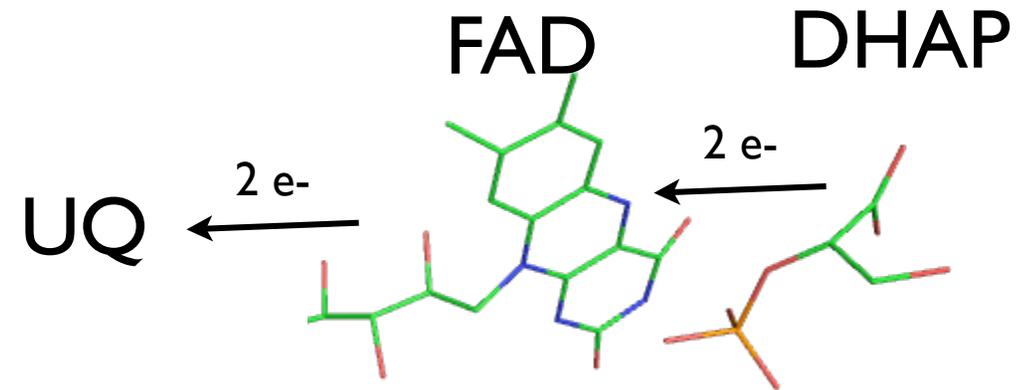
Your name



Mitochondrial matrix

2R45
e coli

Yeh, Chin and Du, PNAS (2008) 3280 Structure of glycerol-3 phosphate dehydrogenase, an essential monotopic membrane enzyme involved in respiration and metabolism



Glycerol 3-Phosphate (reduced) + FAD

Dihydroacetone Phosphate (oxidized)
+FADH₂

Use pymol to show only cartoon colored by chain

Use rcsb site and the paper about the protein to tell you the names of the important elements in your file (look at ligand chemical component identifier). The journal article describing the protein can be found in the 'membrane proteins of known structure' site or at RCSB site.

Select select 2pg, resn 2pg

show sticks

select select fa, resn fad

show sticks

To make a nice picture: in Display - turn off Opaque Background: set background to white

Use Ray button and as soon as it is done use the copy command for your computer.

This will past to the clipboard to put into your slide

I also used zoom to center on these groups after I had hidden the rest of the protein.

I got the reaction from wikipedia and also how the protein is oriented in the membrane (inside and outside the a bacterial cell or the mitochondria

I copied the picture on the left from a paper and made the picture on the right myself. That paper told me that the group GAP in the crystal structure is an analog of the substrate G3P

I also put on the arrows myself.